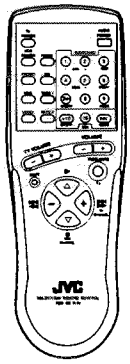
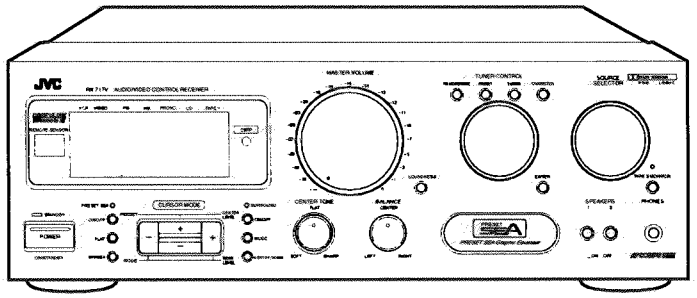
JVC

SERVICE MANUAL

AUDIO/VIDEO CONTROL RECEIVER

RX-717VTN





Area Suffix
C ..... Canada
J ..... the U.S.A.

AV COMPU LINK

COMPU LINK
Remote
Control Component

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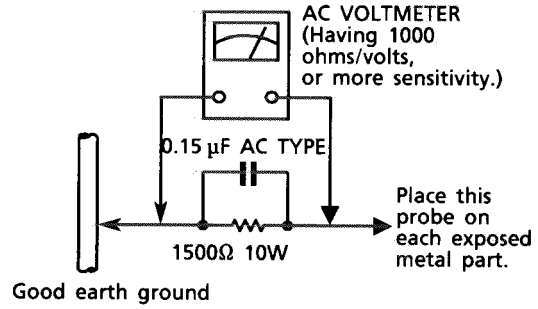
No. 20502
DEC. 1994

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, contorl shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet , particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 µF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

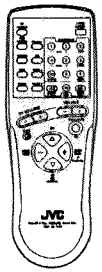
1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

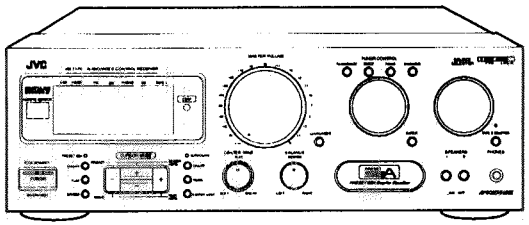
JVC

INSTRUCTIONS

RX-717VTN

AUDIO/VIDEO CONTROL RECEIVER





AV COMPU LINK

COMPU LINK Remote Control Component

For Customer Use:
Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____

E30580-2166A
[J]

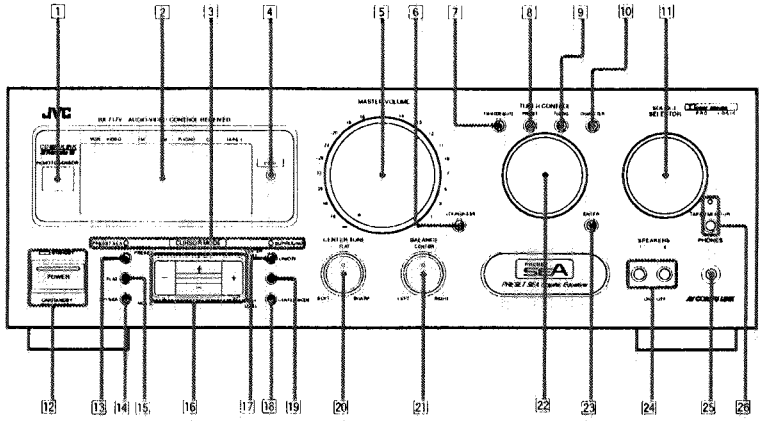
(No.20502) 1-3

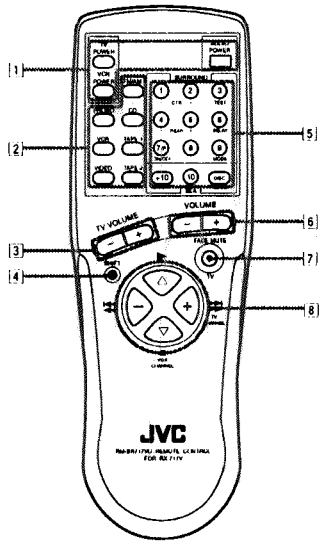
Instruction Book

Introduction

Become familiar with the main switches and controls on your RX-717VTN before use.

Switches, Buttons and Controls





Refer to the pages in parentheses for details.

Front Panel

1. Remote sensor
2. Display (11)
3. CURSOR MODE button and indicators (17)
4. CSRP button (24)
5. MASTER VOLUME control (12)
6. LOUDNESS button (13)
7. FM MODE/MUTE button (15)
8. PRESET button (15)
9. TUNING button (14)
10. CHARACTER button (16)
11. SOURCE SELECTOR (11)
12. POWER button and STANDBY indicator (11)
13. Preset SEA ON/OFF button (17)
14. SPI/SEA (Spectrum Peak Indicator/Sound Equalizing Amplifier) button (17)
15. FLAT button (17)
16. Cursor buttons (+/–) (17, 20)
17. Surround ON/OFF button (20, 21, 23)
18. CENTER MODE button (21)
19. Surround MODE button (20, 21, 23)
20. CENTER TONE control (23)
21. BALANCE control (12)
22. TUNER CONTROL (14, 16)
23. ENTER button (14, 16)
24. SPEAKERS 1/2 buttons (12)
25. PHONES jack (13)
26. TAPE2 MONITOR button and indicator (11, 24)

Remote Control

1. POWER buttons (11, 25)
2. Source selecting buttons (11)
3. TV VOLUME buttons (+/–) (25)
4. SHIFT button (17, 20)
5. 10 keys (14, 25)
   * Surround adjustment buttons (20, 21, 23)
   * Preset SEA selecting buttons (17) DISC button (25)
6. VOLUME buttons (+/–) (12)
7. FADE MUTE button (13)
   * TV button (25)
8. * Operating buttons for JVC audio/video components (25)

** Some buttons on the remote control have been assigned more than one function. To have the buttons function as marked in green, press the SHIFT button at the same time.*

Getting Started

This section explains how to connect stereo components and speakers to the RX-717VTN, and how to connect the power supply.

Before Installation

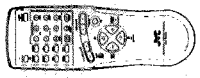
General
- Be sure your hands are dry.
- Turn the power off to all components.
- Read the manuals supplied with the components you are going to connect.

Locations
- Install the receiver in a location that is level and protected from moisture.
- The temperature around the receiver must be between 23° and 104° F (–5° and 40° C).
- Make sure there is good ventilation around the receiver. Poor ventilation could cause overheating and damage the receiver.

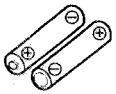
Handling the receiver
- Do not insert any metal object into the receiver.
- Do not disassemble the receiver or remove screws, covers, or cabinet.
- Do not expose the receiver to rain or moisture.

Checking the Supplied Accessories

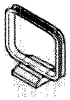
Check to be sure you have all of the following items, which are supplied with the RX-717VTN.



Remote Control



Batteries



AM Loop Antenna

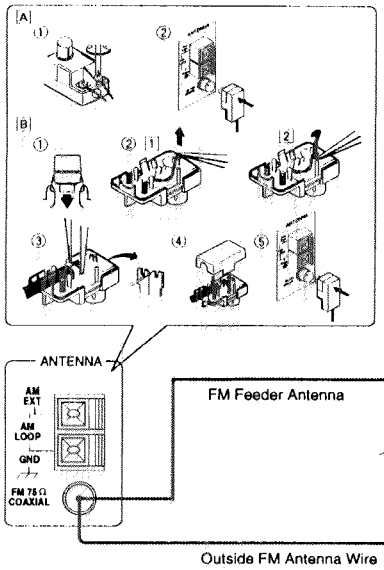
FM Feeder Antenna

Antenna Adaptor

If anything is missing, contact your dealer immediately.

Connecting the FM and AM Antennas

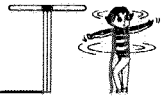
FM Antenna Connections



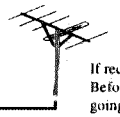
[A] Using the supplied feeder antenna
① Attach the feeder antenna to the supplied antenna adaptor as shown in the figure.
② Connect the antenna adaptor to the FM 75 COAXIAL terminal.

[B] Using FM 75-ohm antenna cable (not supplied)
① Open the claws at both sides and remove the cover.
② Move the conductor wire from [1] to [2] using tweezers or similar tool (only when using coaxial cable).
③ Fix the coaxial cable and its core.
④ Put on the cover.
⑤ Connect the supplied antenna adaptor to the FM 75 COAXIAL terminal.

Note:
Make sure the antenna conductors do not touch any other terminals, connecting cords and power cord. This could cause poor reception.

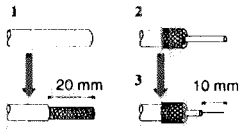


" Unfold the loops of the supplied FM feeder antenna and extend them as shown.
Fasten them up in the position which gives you the best FM reception.



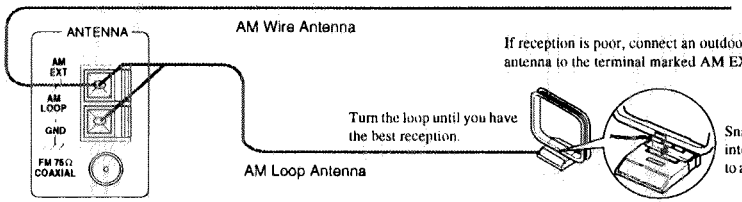
If reception is poor, connect the outside antenna.
Before attaching a 75-ohm coaxial cable (the kind with a round wire going to an outside antenna), disconnect the supplied antenna.

How to strip the 75-ohm coaxial cable



1. **Strip back the outside covering of the 75-ohm coaxial cable to expose the braided metallic mesh.**
2. **Pull the mesh back over the cable as shown.**
3. **Strip the insulation about 10 mm back from the central wire.**
4. **Attach to the supplied antenna adaptor, as shown in the diagram above.**

AM Antenna Connections



If reception is poor, connect an outdoor single vinyl-covered antenna to the terminal marked AM EXT.

Turn the loop until you have the best reception.

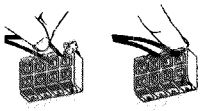
Snap the tabs on the loop into the slots of the base to assemble the AM loop.

Note :
Even when connecting an outside AM antenna, keep the indoor AM loop antenna connected.

Connecting the Speakers

You can connect the following speakers:
- Two sets of front speakers to produce normal stereo sound
- One set of rear speakers to enjoy the surround effect
- One center speaker to produce more effective surround effect
- One subwoofer speaker to enhance the bass

For each speaker, connect one end of the speaker signal cable (not supplied) to the speaker terminal on the rear panel and the other end to the speaker. (For connecting a subwoofer, see also page 7.)

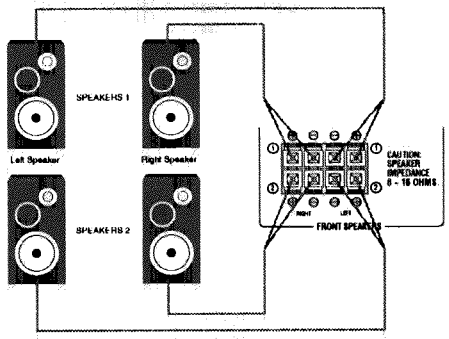


1. **Open each terminal.**
2. **Insert the end of the speaker signal cable as shown (be sure to remove the insulation at the end of each wire first).**
3. **Close the terminals to clamp the speaker signal cables firmly in place.**
4. **Connect the black (–) and red (+) terminals on the rear panel to the black (–) and red (+) terminals marked on the speakers.**

CAUTION:
Use speakers with the same impedance as marked near the terminals on the rear panel.

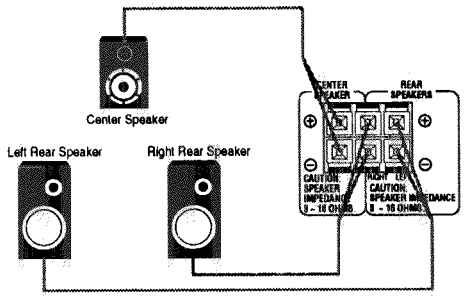
Connecting the front speakers

Connect the front speakers to the FRONT SPEAKERS terminals.



Connecting the rear and center speakers

Connect rear speakers to the REAR SPEAKERS terminals,and a center speaker to the CENTER SPEAKER terminals.



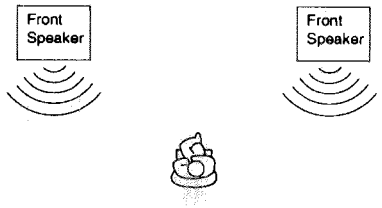
Note:
When you connect rear speakers, make sure that both left and right speakers are connected; otherwise, no sound will come out of the rear speakers.

About the speaker impedance of the speakers

CAUTION:
When connecting speakers, use speakers with the same SPEAKER IMPEDANCE indicated by the speaker terminals.

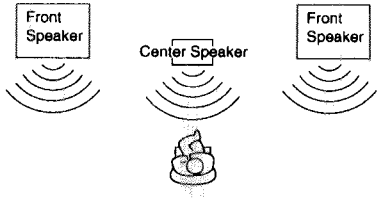
Note:
The required speaker impedance of the front speakers does not differ depending on whether both the FRONT SPEAKERS ① and FRONT SPEAKERS ② terminals are used or only one of them is used.

CASE 1 **When you connect only front speakers**



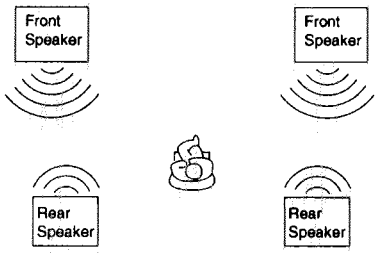
Use front speakers with **8 — 16 ohm** impedance.

CASE 2 **When you connect front speakers and a center speaker**



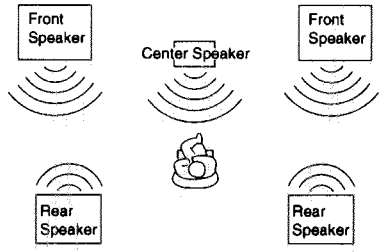
Use the following speakers;
- Front speakers: **8 — 16 ohm** impedance
- Center speaker: **8 — 16 ohm** impedance

CASE 3 **When you connect front and rear speakers**



Use the following speakers;
- Front speakers: **8 — 16 ohm** impedance
- Rear speakers: **8 — 16 ohm** impedance

CASE 4 **When you connect front and rear speakers as well as a center speaker**



Use the following speakers;
- Front speakers: **8 — 16 ohm** impedance
- Rear speakers: **8 — 16 ohm** impedance
- Center speaker: **8 — 16 ohm** impedance

(No.20502) 1-5

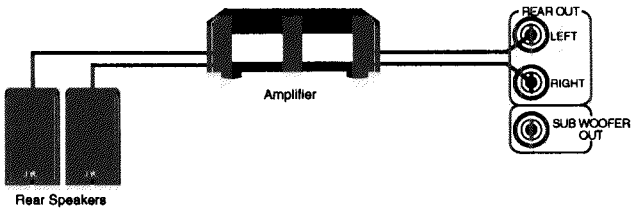
RX-717VTN

Increasing the power for the rear speakers

You can use a separate power amplifier to reinforce sounds through the rear speakers.

1 **Connect the input jacks of the power amplifier to the REAR OUT jacks on the rear panel.**

2 **Connect the rear speakers to the speaker terminals of the power amplifier.**

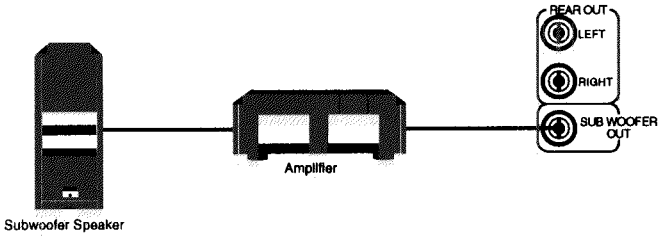


Enhancing the bass

You can use a subwoofer speaker to enhance the bass.

1 **Connect the input jacks of the power amplifier to the SUB WOOFER OUT jacks on the rear panel.**

2 **Connect a subwoofer speaker to the speaker terminal of the power amplifier.**



Connecting Audio/Video Components

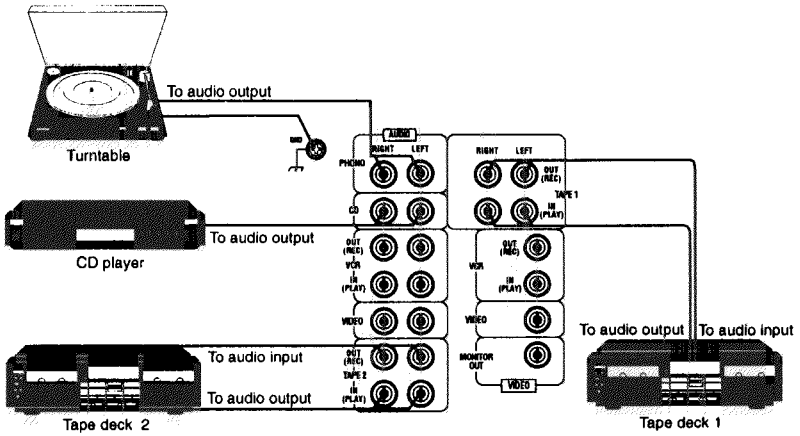
You can connect the following components to the receiver using cables with RCA pin plugs.

Audio Components	Video Components
• Turntable	• VCR
• CD player	• Video disc player
• Tape deck(s)	• TV

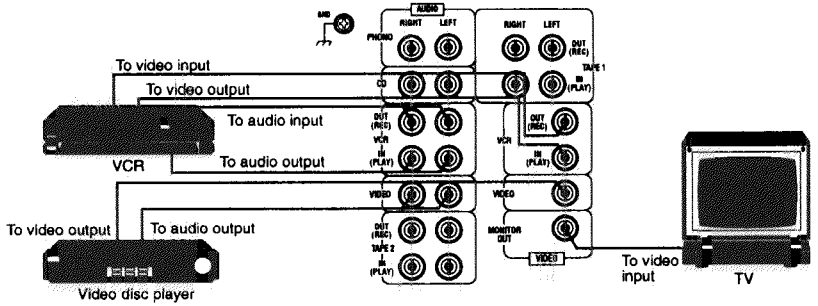
Notes:

- *Both plugs and jacks are color-coded; the red ones are for right audio signals, the white ones for left audio signals, and yellow ones for video signals.*
- *Any turntables incorporating a small-output cartridge such as an MC (moving-coil type) must be connected to this amplifier through a commercial head amplifier or step-up transformer. Direct connection may result in insufficient volume.*
- *If an earth cable is provided for your turntable, connect the cable to the screw marked GND on the rear panel.*

Audio component connections



Video component connections



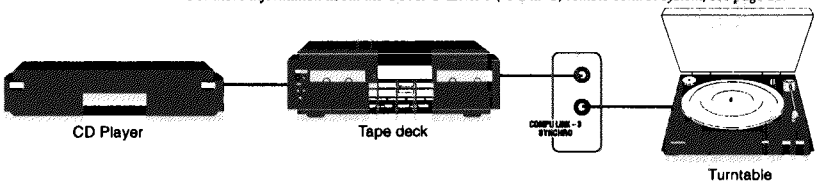
Connecting Audio Components for the COMPU LINK-3 Remote Control System

The COMPU LINK-3 remote control system allows you to control other JVC audio components from the RX-717VTN or vice versa. To use this system, connect your JVC audio components and the RX-717VTN with the cable (monaural mini-plug) supplied with those components.

If your audio component has two COMPU LINK-3 SYNCHRO jacks, you can use either one.
If it has only one COMPU LINK-3 SYNCHRO jack, connect it so that it is the last item in the series of components. (for example, the turntable in the diagram below)

Notes:

- *The COMPU LINK-3 remote control system is the upgraded version of the COMPU LINK-1 and COMPU LINK-2. Even if your component have the COMPU LINK-1 or COMPU LINK-2 jacks, you can still connect it in the COMPU LINK-3 remote control system, but some functions may not work correctly.*
- *For more information about the COMPU LINK-3 (-1 and -2) remote control system, see page 26.*

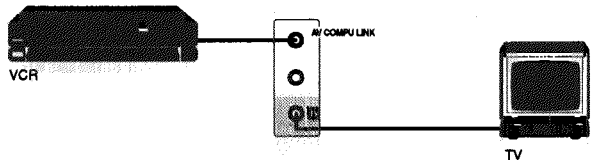


CAUTION:
The COMPU LINK-3 remote control system cannot control the tape deck connected to the TAPE2 jacks. Use only the tape deck connected to the TAPE1 jacks.

Connecting Video Components for the AV COMPU LINK Remote Control System

The AV COMPU LINK remote control system allows you to control other JVC video components from the RX-717VTN or vice versa. To use this system, connect your JVC video components and the RX-717VTN with the cable (monaural mini-plug) supplied with those components.

1. **Connect the TV to the jack marked TV.**
2. **Connect a VCR to either one of the remaining two jacks.**

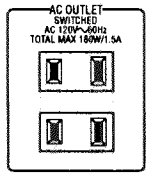


Notes:

- *Some VCRs use the AV COMPU LINK jacks for the SWAP editing. However, you cannot use both the AV COMPU LINK remote control and the SWAP editing at the same time. For the SWAP editing, see the manual supplied with the VCR.*
- *For more information about the AV COMPU LINK remote control system, see page 27.*

CAUTION:
The AV COMPU LINK remote control system cannot control video component connected to the VIDEO jacks. Use only the video component connected to the VCR jacks.

Power Supply through the RX-717VTN to the Connected Components



You can use the AC outlets on the rear of the RX-717VTN to supply power to audio components. These AC outlets are "switched" outlets. So when the RX-717VTN is off (that is, in standby mode), power is not supplied through these outlets. By turning the RX-717VTN on and off, you can turn the connected components on and off at the same time.

Note:
Do not use the AC outlets on the rear of the RX-717VTN to supply power to the components in the COMPU LINK remote control system; otherwise, the COMPU LINK remote control system may not work correctly.

CAUTION:
Do not plug the components to the AC outlets on the rear if their total power consumption is greater than indicated by the AC outlets.

Connecting the Power Cord

Before plugging the RX-717VTN into an AC outlet, make sure that all connections have been made. When the power cord is connected, the STANDBY indicator above the POWER button lights up.

Keep the power cord away from the connecting cables for the TV, VCR, and antenna. The power cord may cause noise or screen interference. We recommend that you use a coaxial cable to connect the antenna, since it is well-shielded against interference.

Notes:

- *A small amount of power is always consumed even in standby mode. To switch off the power completely, unplug the power cord from the AC outlet.*
- *If the power cord is unplugged or a power failure occurs, preset settings will be erased in a few days.*

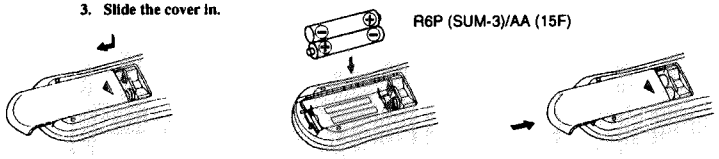
CAUTIONS:

- Do not touch the power cord with wet hands.
- Do not pull on the power cord to unplug the receiver. When unplugging the receiver, always grasp the plug itself so as not to damage the cord.

Putting Batteries in the Remote Control

Before using the remote control, put two supplied batteries first.

1. **On the back of the remote control, press down on the battery cover and slide it out.**
2. **Insert batteries. Make sure to observe the proper polarity: (+) to (+) and (–) to (–).**
3. **Slide the cover in.**



If the range or effectiveness of the remote control decreases, replace the batteries. Use two R6P (SUM-3)/AA (15F) type dry-cell batteries.

CAUTIONS:
Follow these precautions to avoid leaking or cracking cells:

- Place batteries in the remote control so they match the polarity indicated: (+) to (+) and (–) to (–).
- Use the correct type of batteries. Batteries that look similar may differ in voltage.
- Always replace both batteries at the same time.
- Do not expose batteries to heat or flame.

Basic Operations

The following operations are commonly used when you play any sound source.

Turning the Power On and Off

On the front panel

From the remote control

To turn on the power, press the POWER button on the front panel or the AUDIO POWER button on the remote control.
The STANDBY indicator goes off.

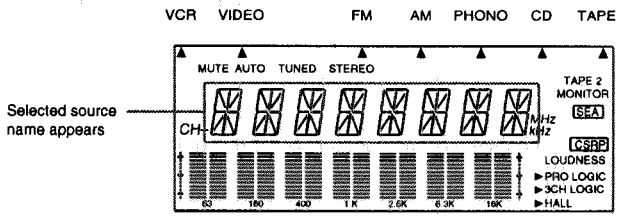
To turn off the power, press the POWER button or AUDIO POWER button on the remote control again.
The STANDBY indicator lights up.

Selecting the Source to Play

You need to select the source to listen to before you start playing any source.

On the front panel:

Turn the SOURCE SELECTOR so that the desired source name appears on the display (at the same time the arrow (▲) on the display points the source).



VCR	View the video component connected to the VCR jacks.
VIDEO	View the video component connected to the VIDEO jacks.
FM	Listen to an FM broadcast.
AM	Listen to an AM broadcast.
PHONO	Listen to a record.
CD	Listen to the CD player.
TAPE1	Listen to the tape deck connected to the TAPE1 jacks.

To listen to the tape deck connected to the TAPE2 jacks, press the TAPE2 MONITOR button (or the TAPE2 button on the remote control) so that the TAPE2 MONITOR indicators light up on the display and on the front panel. However, do not press the TAPE2 MONITOR (or TAPE2) button if no component is connected to the TAPE2 jacks; otherwise, no sound comes out of the speakers.

From the remote control:

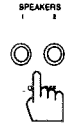
Press the desired source selecting buttons.

VCR	View the video component connected to the VCR jacks.
VIDEO	View the video component connected to the VIDEO jacks.
FM/AM*	Listen to an FM or AM broadcast. Each time you press the button, the band alternates between FM and AM.
PHONO*	Listen to a record.
CD*	Listen to the CD player.
TAPE1*	Listen to the tape deck connected to the TAPE1 jacks.
TAPE2	Listen to the tape deck connected to the TAPE2 jacks.

Notes:

- *The TAPE2 MONITOR button on the front panel and the TAPE2 button on the remote control have a different function from other source selecting buttons, since this button allows you to monitor the recording. For more details, see "Recording Monitor" on page 24.*
- *When you press one of the source selecting buttons marked above with an asterisk, the RX-717VTN automatically turns on.*

Selecting the Front Speakers

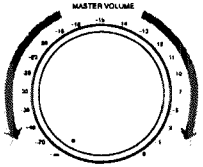


When you have connected two sets of front speakers, you can select which to use. Pressing in the SPEAKERS 1 or SPEAKERS 2 button activates the respective set of speakers.

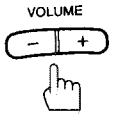
To use the set of speakers connected to the FRONT SPEAKERS (1) terminals, press in the SPEAKERS 1 button (▬ON), and press out the SPEAKERS 2 button (▮OFF).
To use the set of speakers connected to the FRONT SPEAKERS (2) terminals, press in the SPEAKERS 2 button (▬ON), and press out the SPEAKERS 1 button (▮OFF).
To use both sets of speakers, press in both the SPEAKERS 1 and 2 buttons (▬ON).
To use neither set of speakers, press out both the SPEAKERS 1 and 2 buttons (▮OFF).

Note:
When only one set of the front speakers is connected to either the FRONT SPEAKERS (1) or (2) terminals, do not press in both SPEAKERS 1 and 2 buttons (▬ON). If you do, no sound comes out of the front speakers.

Adjusting the Volume



On the front panel



From the remote control

On the front panel:

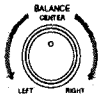
To increase the volume, turn the MASTER VOLUME control clockwise.
To decrease the volume, turn it counterclockwise.

From the remote control:

To increase the volume, press the VOLUME + button.
To decrease the volume, press the VOLUME – button.

CAUTION:
Always set the MASTER VOLUME control to the minimum before starting any source. If the MASTER VOLUME control is left turned up, the sudden blast of sound energy can permanently damage your hearing and/or ruin your speakers.

Adjusting the Front Speaker Output Balance



If the sounds you hear from the right and left front speakers are unequal, you can adjust the speaker output balance with the BALANCE control.

To decrease the left channel sound, turn the BALANCE control clockwise.
To decrease the right channel sound, turn it counterclockwise.

Listening at Low Volume (Loudness)

Human ears are not sensitive to bass at low volume. To compensate for this, the loudness function automatically boosts the bass level as you lower the volume.

To use the loudness function, press the LOUDNESS button.
The LOUDNESS indicator lights up on the display.

To turn the function off, press the LOUDNESS button again.
The LOUDNESS indicator goes off.

Recording a Source

You can record any source playing through the RX-717VTN to the tape decks connected to the TAPE1 and TAPE2 jacks, and the VCR connected to the VCR jacks at the same time.
While recording, you can listen to the selected sound source at whatever sound you like, without affecting the sound levels of the recording.

Notes:

- *When recording from the tape deck connected to the TAPE2 jacks to the one connected to TAPE1, press TAPE2 MONITOR button and select a source other than TAPE1.*
- *The output volume level, preset SEA effects and surround effects cannot affect the recording.*
- *See also "Recording Monitor" on page 24.*

Listening with Headphones

A standard pair of headphones can be connected to the PHONES jack on the front panel. **Be sure to turn down the volume before connecting or putting on headphones, as high volume can damage both the headphones and your hearing.**

To listen with only headphones
Press out both the SPEAKERS 1 and 2 buttons (■OFF).

Muting the Sound

You can easily turn off the volume by pressing the FADE MUTE button on the remote control.

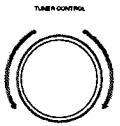
To mute the sound through all speakers and headphones connected
Press the FADE MUTE button so that "MUTING" appears on the display and the VOLUME control turns down.

To cancel the mute, turn the VOLUME control clockwise on the front panel or press the VOLUME + button on the remote control.

Receiving Radio Broadcasts

You can browse through all the stations or use the preset function to go immediately to a particular station.

Tuning in Stations Manually



1. **Select the band.**
   On the front panel:
   Turn the SOURCE SELECTOR.
   From the remote control:
   Press the FM/AM button so that the last received station of the last received band is tuned in.
   Each time you press the button, the band alternates between FM and AM.

   Note:
   If you do not see a preset channel number on the display, the RX-717VTN is already in the manual tuning mode, and then skip Step 2 below.

2. **Press the TUNING button to set the tuning mode to the manual mode.**

3. **Turn the TUNER CONTROL clockwise or counterclockwise.**
   Turning it clockwise increases the frequency.
   Turning it counterclockwise decreases the frequency.

Notes:

- *When you turn the TUNER CONTROL fast, the frequency keeps changing until you turn the TUNER CONTROL again or a station is tuned in.*
- *When a station of sufficient signal strength is tuned in, the TUNED indicator lights up on the display.*
- *When an FM stereo program is received, the STEREO indicator also lights up.*

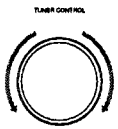
Using the Preset Tuning

Once a station is assigned to a channel number, the station can be quickly tuned. You can preset up to 40 stations, either AM, FM, or a mixture of both, at random.

Storing the preset stations

1. **Tune in the station you want to preset (see above).**

2. **Press the ENTER button.**
   "CH- — —" appears on the display for 5 seconds.



3. **Select a channel number within the 5 seconds.**
   On the front panel:
   Turn the TUNER CONTROL
   From the remote control:
   Press the +10 button and the 10 keys.
   Examples: For channel number 5, press 5. For channel number 15, press +10 then 5.
   For channel number 20, press +10 then 10.

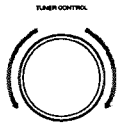
   Note:
   When you use the remote control, be sure that the +10 button and the 10 keys are activated for tuner, not for the CD and others. (See page 25.)

4. **Press the ENTER button again while the selected channel number is blinking on the display.**
   The selected channel number stops blinking, and the station is assigned to the selected channel number.

To cancel a stored preset station
Storing a new station on a used number erases the previously stored one.

> **CAUTION:**
> Preset stations may be erased when power is cut off to the RX-717VTN, as when it is unplugged from the AC outlet or a power failure occurs. If the preset stations are lost, simply set the stations again using the above procedure.

Tuning in a Preset Station



On the front panel:

1. **Turn the SOURCE SELECTOR to select either FM or AM.**
   The last received station of the selected band is tuned in.

   Note:
   If you see a preset channel number on the display, the RX-717VTN is already in the preset tuning mode, and then skip Step 2 below.

2. **Press the PRESET button to set the tuning mode to the preset mode.**

3. **Turn the TUNER CONTROL to select a preset channel number.**
   Turning it clockwise changes preset channels in increasing order.
   Turning it counterclockwise changes preset channels in decreasing order.

On the remote control:

1. **Press the FM/AM button.**
   Press the FM/AM button so that the last received station of the last selected band is tuned in.
   Each time you press the button, the band alternates between FM and AM.

2. **Press the +10 button and the 10 keys to select a preset channel number.**
   Examples: For channel number 5, press 5. For channel number 15, press +10 then 5.
   For channel number 20, press +10 then 10.

   Note:
   When you use the remote control, be sure that the +10 button and the 10 keys are activated for tuner, not for the CD and others. (See page 25.)

Selecting the FM Reception Mode

You can change the FM reception mode so that reception will be improved.

When an FM stereo broadcast is hard to receive or noisy
Press the FM MODE/MUTE button on the front panel. The MUTE AUTO indicator goes off on the display. Reception will be improve although you will lose the stereo effect. In this mode, you will hear noise while tuning into the stations.

To restore stereo effect
Press the FM MODE/MUTE button again so that the MUTE AUTO indicator lights up on the display. In this mode, when a program is broadcast in stereo, you will hear stereo sound; when in monaural, you will hear monaural sounds. This mode is also useful to suppress static noise between stations.

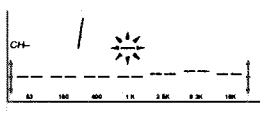
Assigning Names to Preset Stations

You can assign a name of up to four character to each preset station (from channel number 1 to 20). When a preset station is tuned in, its assigned name will appear on the display.

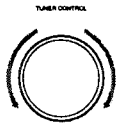
On the front panel *only*:

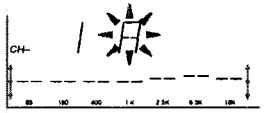
1. **Tune in a preset station (channel number 1 to 20).**
   See page 15 for details.

2. **Press the CHARACTER button.**
   The cursor appears at the first character position.

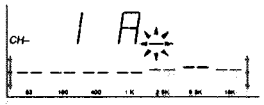


3. **Turn the TUNER CONTROL to select a character for the first position.**
   You can use characters listed below





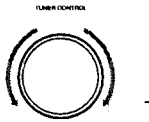
4. **When the character you want appears, press the CHARACTER button.**
   The cursor moves to the next character position.

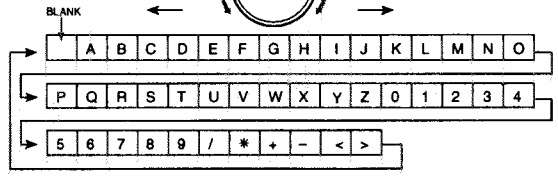


5. **Repeat Steps 3 and 4 to enter up to four characters.**

6. **Press the ENTER button after you have assigned a name.**

Available characters





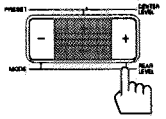
Using the Preset SEA Effects

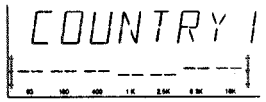
The RX-717VTN has five preset SEA (Sound Effect Amplifier) effects (COUNTRY, JAZZ, ROCK, MUSICAL, and MOVIE) which give you control of the way your music sounds, so you can tailor it for your room and for the quality of the source.

On the front panel:

1. **Press ON/OFF button under the PRESET SEA indicator so that the SEA indicator lights up on the display.**
   Now the previously selected preset SEA comes into effect.

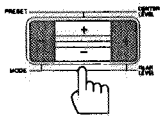
2. **Press the left or right cursor button (+/–) to select a preset SEA effect.**
   Pressing the button changes the preset SEA effects in the following sequence:





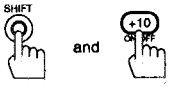
COUNTRY:	Enhances the high-frequency range so that instruments such a violin and banjo sound outstanding.
JAZZ:	Gives a feeling of a live atmosphere. Good for acoustic music.
ROCK:	Gives a heavy sound. Both high and low frequencies are boosted.
MUSICAL:	Enhance the mid-frequency range which human voice is mostly made up of.
MOVIE:	Adds breath to sounds so you feel like you are in a movie theater.

Note:
When using the cursor buttons, make sure that the PRESET SEA indicator on the front panel is turned on. If not, press the CURSOR MODE button once so that the cursor buttons can be used for selecting a preset SEA effect and its level.

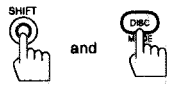


3. **Press the upper or lower cursor button (+/–) to select the level (from 1 to 5) of the preset SEA effect selected in above step.**
   Pressing the upper cursor button (+) increases the effect level.
   Pressing the lower cursor button (–) decreases the effect level.

From the remote control:



1. **Press ON/OFF button on the SEA section while pressing the SHIFT button so that the SEA indicator lights up on the display.**
   Now the previously selected preset SEA comes into effect.



2. **Press the MODE on the SEA section while pressing the SHIFT button.**
   Each time you press the MODE button, the preset SEA effects changes.

Note:
You cannot change the effect level by using the remote control. To do this, use the upper and lower cursor buttons on the front panel.

To flatten the equalizing curve while using the preset SEA effects
Press the FLAT button on the front panel so that "SEA FLAT" appears on the display.

To compare the original sound and the sound processed by using the preset SEA effects
Press the ON/OFF button for the preset SEA effects repeatedly. (When using the remote control, press the button while pressing the SHIFT button.)
- While the SEA indicator is turned on, you can listen to the processed sound.
- While the SEA indicator is turned off, you can listen to the original sound.

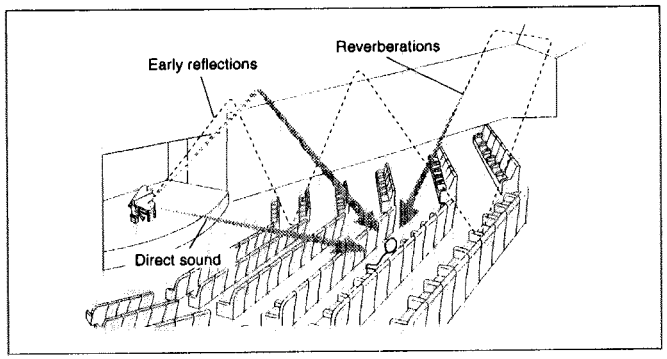
To see the actual sound output level on the display (Spectrum Peak Indicator mode)
Press the SPI/SEA button on the front panel so that the actual sound output level can be shown in 7 frequency ranges on the display.
To cancel it, press the button again.

Using the Surround Processor

The built-in surround processor provides three types of sound programs — Dolby Pro Logic, Dolby 3-Channel Logic, and JVC's Hall Surround.

What is surround?

The sound heard in a concert hall or a movie theater consists of direct sound and indirect sound: early reflections and reverberations. The reflected sound and the reverberations are always delayed by the distances of the ceiling and walls from the listener. The early reflections and reverberations are some of the most important elements of the acoustic surround.



On JVC's Hall Surround

In order to reproduce a more realistic sound field in your listening room while playing an ordinary stereo source, JVC's Hall Surround has been designed to give you clear vocals and to create the feeling of a concert hall. The sound is reproduced through the front speakers and rear speakers.

On Dolby Surround

The Dolby Surround has been also developed to reproduce the important elements of the acoustic surround at home.
To watch the soundtracks of video software bearing the mark DOLBY SURROUND * which includes the same encoded surround information as found in Dolby Stereo films, the RX-717VTN can provide you with 2 Dolby Surround programs (Dolby Pro Logic and Dolby 3ch Logic).
Dolby Pro Logic: Select this mode when optional rear speakers are connected.
Dolby 3ch Logic: Select this mode when a center speaker is connected without rear speakers.

Notes:
- *The surround processor has no effect on monaural sources.*
- *The surround processor cannot be used for recording.*

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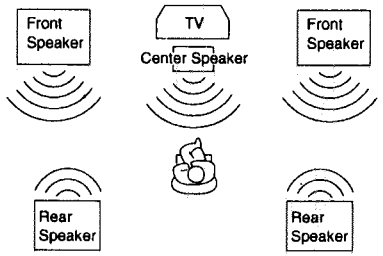
(No.20502) 1-11

Speaker arrangements for Dolby Surround

The following illustrations show how to obtain the optimum sound environment for various Dolby Surround settings. Try to find the speaker direction and location to create the optimum sound field.

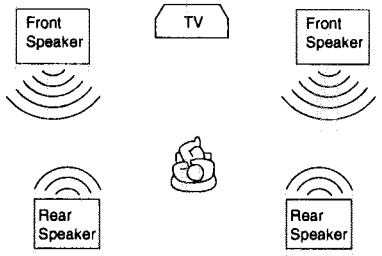
CASE 1 **When you have added a center speaker and rear speakers**



In this case:
1. Select PRO LOGIC.
2. Select NORMAL or WIDE for center mode.

See page 21 for more details.

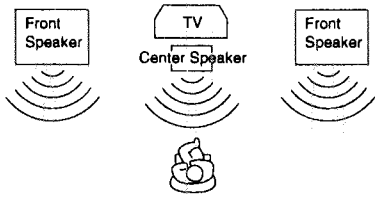
CASE 2 **When you have added rear speakers**



In this case:
1. Select PRO LOGIC.
2. Select PHANTOM for center mode.

See page 21 for more details.

CASE 3 **When you have added a center speaker (without rear speakers)**

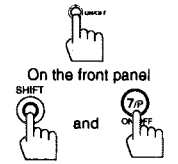


In this case:
1. Select 3CH LOGIC.
2. Select NORMAL or WIDE for center mode.

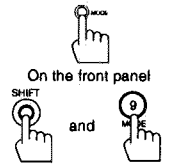
See page 21 for more details.

Using JVC's Hall Surround

You need to connect one set of rear speakers to obtain the full effect.

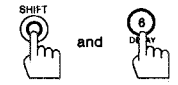


1. **Set the surround mode on.**
On the front panel:
Press the ON/OFF button under the SURROUND indicator so that one of the surround program indicators (PRO LOGIC, 3CH LOGIC, or HALL) lights up on the display.
From the remote control:
Press the ON/OFF button on the SURROUND section while pressing the SHIFT button so that one of the surround program indicators lights up on the display.



2. **Select HALL.**
On the front panel:
Press the MODE button repeatedly until the HALL indicator lights up on the display.
From the remote control:
Press the MODE button on the SURROUND section repeatedly while pressing the SHIFT button, until the HALL indicator lights up on the display.
Each time you press the MODE button, the surround program changes as follows:

PRO LOGIC → 3CH LOGIC → HALL →

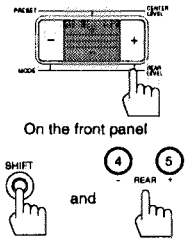


3. **Set the delay time of the delayed sound.**
From the remote control *only*:
Press the DELAY button while pressing the SHIFT button.
Each time you press the button, the delay time changes among 3 levels.

DELAY-1 → DELAY-2 → DELAY-3 →

DELAY-1: When your distance to the rear speakers is greater than that to the front speakers.
DELAY-2: When your distance to your rear speakers is almost equal to that to the front speakers.
DELAY-3: When your distance to your rear speakers is less than that to the front speakers.

Note:
Once you have adjusted the delay time for the Hall Surround, the RX-717VTN memorizes the setting.



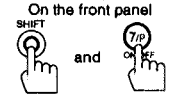
4. **Set the output levels of the rear speakers.**
On the front panel:
Press the left or right cursor button (+/–) to set the sound level of the rear speakers.
From the remote control:
Press the REAR +/– button while pressing the SHIFT button to set the sound level of the rear speakers.

Notes:
- *When using the cursor buttons on the front panel, make sure that the SURROUND indicator is turned on. If not, press the CURSOR MODE button once so that the cursor buttons can be used for adjusting the sound level of the rear speakers.*
- *You can adjust the front speaker output balance by using the BALANCE control.*
- *You can adjust the sound level in 2 dB steps within the range of ±20 dB. The sound levels of the left and right rear speakers will be the same.*
- *Although the sound level of the rear speakers can be stored, they are not stored separately for each surround program.*

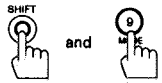
To cancel the Hall Surround, press the ON/OFF button again. (When using the remote control, press the ON/OFF button while pressing the SHIFT button.)

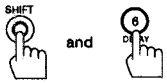
Preparing for the Dolby Surround

On the front panel


From the remote control

On the front panel


From the remote control



The RX-717VTN memorizes two sets of Dolby Surround adjustments; one for Pro Logic and the other for 3ch Logic. However, the sound levels of center and rear speakers cannot be stored separately.

1. **Set the surround mode on.**
   On the front panel:
   Press the ON/OFF button under the SURROUND indicator so that one of the surround program indicators (PRO LOGIC, 3CH LOGIC, or HALL) lights up on the display.
   From the remote control:
   Press the ON/OFF button on the SURROUND section while pressing the SHIFT button so that one of the surround program indicators lights up on the display.

2. **Select either PRO LOGIC or 3CH LOGIC.**
   On the front panel:
   Press the MODE button repeatedly.
   From the remote control:
   Press the MODE button on the SURROUND section repeatedly while pressing the SHIFT button.
   Each time you press the MODE button, the surround program changes as follows:

   PRO LOGIC → 3CH LOGIC → HALL →

   PRO LOGIC: Select this mode when you use the rear speakers
   3CH LOGIC: Select this mode when you use no rear speakers
   HALL: This is JVC's original surround program, and is different from the Dolby Surround. To use this, see page 20.

3. **Set the center mode.**
   On the front panel *only*:
   Press the CENTER MODE button.
   Each time you press the CENTER MODE button, the mode changes as follows.

   PHANTOM → NORMAL → WIDE → OFF →

   PHANTOM: Select this mode when you don't use a center speaker.
   NORMAL: Select this mode when the size of the center speaker is smaller than that of the front speakers.
   WIDE: Select this mode when the size of the center speaker is the same as that of the front speakers.
   OFF: Select this mode to shut off the output of the center channel signal.

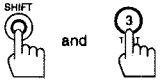
   Note:
   When you have selected 3CH LOGIC in Step 2 above, you cannot select PHANTOM.

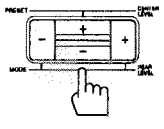
4. **Set the delay time of the delayed sound.**
   From the remote control *only*:
   Press the DELAY button while pressing the SHIFT button.
   Each time you press the button, the delay time changes among 3 levels.

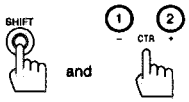
   DELAY-1 → DELAY-2 → DELAY-3 →

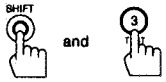
   DELAY-1: When your distance to the rear speakers is greater than that to the front speakers.
   DELAY-2: When your distance to your rear speakers is almost equal to that to the front speakers.
   DELAY-3: When your distance to your rear speakers is less than that to the front speakers.

   Note:
   When you have selected 3CH LOGIC in Step 2 above, you cannot adjust the delay time.




On the front panel


From the remote control



5. **Start checking speaker output balance.**
   From the remote control *only*:
   Press the TEST button while pressing the SHIFT button.
   When you press the button, "TEST" starts blinking and a test tone comes out of speakers in the following order:

   Left front speaker → Center speaker → Right front speaker →
   Rear speakers ←

6. **Set the output levels of the center and the rear speakers.**
   On the front panel:
   Press the upper or lower cursor button (+/–) to set the sound level of the center speaker.
   Press the left or right cursor button (+/–) to set the sound level of the rear speakers.
   From the remote control:
   Press the CTR +/– button while pressing the SHIFT button to set the sound level of the center speaker.
   Press the REAR +/– button while pressing the SHIFT button to set the sound level of the rear speakers.

   Notes:
   - *When using the cursor buttons on the front panel, make sure that the SURROUND indicator is turned on. If not, press the CURSOR MODE button once so that the cursor buttons can be used for adjusting the sound levels of the center and the rear speakers.*
   - *You can adjust the front speaker output balance by using the BALANCE control.*
   - *You can adjust these levels in 2 dB steps within the range of ±20 dB. The sound levels of the left and right rear speakers will be the same.*
   - *You cannot set the sound level of the rear speakers when you have selected 3CH LOGIC.*
   - *You cannot set the sound level of the center speaker when you select PHANTOM or OFF for center mode.*
   - *Although the sound levels of center and rear speakers can be stored, they are not stored separately for each surround program.*

5. **Finish checking speaker output balance.**
   From the remote control *only*:
   Press the TEST button again while pressing the SHIFT button.
   The test tone stops.

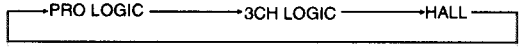
Using the Dolby Surround

Once you have set the Dolby Surround adjustments you can use the same adjustments every time you want to enjoy Dolby Surround.

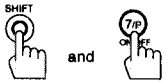
On the front panel:

1. **Press the ON/OFF button under the SURROUND indicator so that one of the surround program indicators lights up on the display.**

2. **Press the MODE button repeatedly until the surround program indicator (PRO LOGIC or 3CH LOGIC) you want lights up.**
   Each time you press the MODE button, the display changes to show the following:

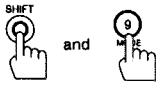


3. **Play a sound source which was processed with Dolby Surround and is labeled with DOLBY SURROUND mark.**

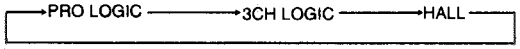


From the remote control:

1. **Press the ON/OFF button on the SURROUND section while pressing the SHIFT button so that one of the surround program indicator lights up on the display.**



2. **Press the MODE button on the SURROUND section repeatedly while pressing the SHIFT button until the surround program indicator (PRO LOGIC or 3CH LOGIC) you want lights up.**
   Each time you press the MODE button, the display changes to show the following:



3. **Play a sound source which was processed with Dolby Surround and is labeled with DOLBY SURROUND mark.**

To cancel the Dolby Surround, press the ON/OFF button again. (When using the remote control, press the ON/OFF button while pressing the SHIFT button.)

To make dialogues in movies softer or clearer

By using the CENTER TONE control you can adjust the level of mid-frequency range, which the human voice is mostly made up of.

To make dialogues clearer, turn the control toward SHARP.
To make them softer, turn the control toward SOFT.
When set to the FLAT position, no adjustment is applied.

Note:
The CENTER TONE control cannot be used when sounds do not come out of the center speaker.

Other Features

The RX-717VTN has some other features like the recording monitor function and the CSRP function. By using these useful features your audio life will be much improved.

Recording Monitor

If the tape deck connected to the TAPE2 jacks is of the three-head type, you can compare the sound quality of the playing source and of the recording being made on the tape deck.

To use the recording monitor function
Press the TAPE2 MONITOR button on the front panel or the TAPE2 button on the remote control.
The TAPE2 MONITOR indicators light up on the display and on the front panel. You can hear the sound just recorded on the tape.

To cancel recording monitor function
Press the TAPE2 MONITOR button or the TAPE 2 button again.
The TAPE2 MONITOR indicators go off, and you hear the sound from the source playing.

Notes:
- *Refer also to the manual supplied with your tape deck.*
- *Do not press the TAPE2 MONITOR (or TAPE2) button if no component is connected to the TAPE 2 jacks; otherwise, no sound comes out of the speakers.*

Using the CSRP Function

The optimum sound settings differ for each playing source. So, you have to change settings each time you select a different source.
The JVC's CSRP (COMPU LINK Source-Related Preset) function is used to assign and store different sound settings for each different playing source. By using this function, you don't have to change the settings every time you change the source. The stored settings for the newly selected source are automatically recalled.

The following can be stored for each source:
- Loudness (see page 13)
- Preset SEA effects (see page 17)
- Surround settings (see page 21)

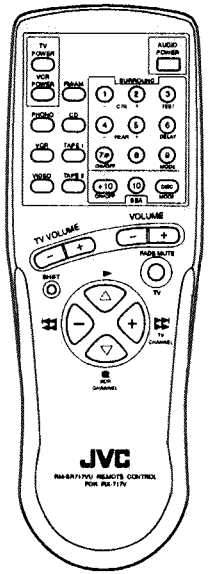
Note:
- *For the tape deck connected to the TAPE2 jacks, the CSRP function does not work.*
- *If the source is FM or AM, the CSRP function works only when one of the preset channels from 1 — 20 is tuned in. You can assign a different setting for each preset channel.*

To store the sound settings by using the CSRP function
1. **Press the CSRP button on the front panel.**
   The CSRP indicator lights up on the display.

2. **Select the sound effect listed above while the CSRP indicator is turned on.**

To recall the sound settings
Whenever the CSRP indicator is turned on, the settings for the currently selected source is always recalled.
When you change the source, it takes about 5 seconds to activate the CSRP function (during the 5 seconds the CSRP indicator blinks).
To cancel the CSRP function, press the CSRP button so that the CSRP indicator goes off from the display.

Using the Remote Control



You can operate JVC's audio and video components with this receiver's remote control, since control signals for JVC components are preset in the remote control.
To operate these components with the remote control, first select a source with the source selecting buttons on the remote control. Then, operate that source using the remote control.

Note:
If you choose a source on the front panel directly, the remote control will not operate that source. To operate a source with the remote control, the source must be selected using buttons on the remote control.

After pressing the FM/AM button, you can perform the following operations:
FM/AM Alternates between FM and AM.
1 — 10, +10 Selects a preset channel number directly
To select channel number 5, press 5. For channel number 15, press +10, then 5. For channel number 20, press +10, then 10.

After pressing the CD button, you can perform the following operations on a CD player:
► Starts playing
|◄◄ Returns to the beginning of the current track
►►| Skips to the beginning of the next track
■ Stops playing
1 — 10, +10 Selects a track number directly
To select track number 5, press 5. For track number 15, press +10, then 5. For track number 20, press +10, then 10.

After pressing the TAPE1 button, you can perform the following operations on a tape deck:
► Starts playback
◄◄ Fast winds the tape from right to left
►► Fast winds the tape from left to right
■ Stops operation

After pressing the VCR button, you can perform the following operations on a VCR:
► Starts playback
◄◄ Rewinds a tape
►► Fast winds a tape
■ Stops operation
VCR CHANNEL (▲, ▼) Changes the TV channels on the VCR (always used while the SHIFT button is held down.)

You can also perform the following operations on a TV
TV Changes the input mode to TV (always used while the SHIFT button is held down.)
TV VOLUME +/– Adjust the TV volume
TV CHANNEL +/–Changes the TV channels (always used while the SHIFT button is held down.)

Note:
You can also turn the VCR and TV on and off by pressing the VCR POWER or TV POWER button on the remote control.

After pressing the DISC button, you can perform the following operations on a CD player-changer:
1 — 6, P Select the number of a disc installed in a CD player-changer. Then continue to operate the CD player as described above.

Note:
If you have the CD player-changer XL-MC100C and XL-MC100M, 1 — 6 buttons function as the DISC SKIP button.
- *Press 2, 4, or 6 to skip to the next disc.*
- *Press 1, 3, or 5 to skip back to the previous disc.*

COMPU LINK Remote Control System

COMPU LINK Remote Control System

The COMPU LINK remote control system allows you to operate JVC audio components through the remote sensor on the RX-717VTN.
To use this remote control system, you need to connect JVC audio components through the COMPU LINK-3 SYNCHRO jacks (see page 9) in addition to the connections using cables with RCA pin plugs (see page 8).
This remote control system allows you to use four functions listed below.

■ Remote Control through the Remote Sensor on the RX-717VTN

You can control all components through the remote sensor on the RX-717VTN using this remote control.
For details, see page 25.

Note:
Aim the remote control directly at the remote sensor on the RX-717VTN.

■ Automatic Source Selection

When you press the play (►) button on a connected component or on its own remote control, the RX-717VTN automatically turns on and changes the source to the component. On the other hand, if you select a new source on the RX-717VTN or the remote control, the selected component begins playing immediately.
In both cases, the previously selected source continues playing without sound for a few seconds.

■ Automatic Power On/Off (only possible with the COMPU LINK-3 connection)

Both the CD player and tape deck turns on and off along with the RX-717VTN.
When you turn on the RX-717VTN, the CD player or tape deck will turn on automatically, depending on which component has been previously selected.
When you turn off the RX-717VTN, both the CD player and tape deck will turn off.

■ Synchronized Recording

Synchronized recording means the tape deck starts recording as soon as a CD or record begins playing.

To use synchronized recording, follow these steps:
1 **Put a tape in the tape deck, and a disc in the CD player (or a record on the turntable).**
2 **Press the record (●) button and the pause (II) button on the tape deck at the same time.**
This puts the tape deck into recording pause.

Note:
If you do not press the record (●) button and pause (II) button at the same time, the synchronized recording feature will not operate.

3 **Press the play (►) button on the CD player or on the turntable.**
The source changes on the RX-717VTN, and as soon as play starts, the tape deck starts recording.
When the play ends, the tape deck enters recording pause, and stops 4 seconds later.

Notes:
- *During synchronized recording, the selected source cannot be changed.*
- *If your CD player is playing in program mode, a 4-second blank is recorded between tracks so that the music scan feature of your tape deck can be used on the recorded tape.*
- *If the power of any component is shut off during synchronized recording, the COMPU LINK remote control system may not operate properly. In this case, you must start again from the beginning.*
- *Refer also to the manuals supplied with your audio components.*

AV COMPU LINK

The AV COMPU LINK remote control system allows you to operate JVC video components through the RX-717VTN.
To use this remote control system, you need to connect JVC video components through the AV COMPU LINK jacks (see page 9) in addition to the connections using cables with RCA pin plugs (see page 8). However, this remote control system cannot control video component connected to the VIDEO jacks. So, when you connect the VCR, connect it to the VCR jacks.
This remote control system allows you to use three functions listed below.

■ Remote Control of the TV through the Remote Sensor on the RX-717VTN

You can control the TV through the remote sensor on the RX-717VTN using this remote control.
For details, see page 25.

Note:
Aim the remote control directly at the remote sensor on the RX-717VTN when operating the TV. (However, to operate the VCR, always aim the remote control directly at the remote sensor on the VCR.)

■ One-Touch Video Play

Simply by inserting a video cassette without its safety tab into the VCR, you can enjoy the video playback without setting other switches manually.
The RX-717VTN automatically turns on and changes the source to the VCR.
The TV automatically turns on and changes the input mode to VIDEO.
When you insert a video cassette with its safety tab, press the play (►) button on VCR or on the remote control.
So, you can get the same result.

■ Automatic Power On/Off

Both the TV and the VCR turn on and off along with the RX-717VTN.
When you turn on the RX-717VTN;
- If the previously selected source is VCR, the TV and VCR will turn on automatically.
- If the previously selected source is TV, only the TV will turn on automatically.

When you turn off the RX-717VTN, both the TV and VCR will turn off.

Notes:
- *If you turn off the RX-717VTN while recording on the VCR, the VCR will not turn off, but continue recording.*
- *Refer also to the manuals supplied with your video components.*

Once you have found the best surround settings for your listening room, note them in the table below for future reference (even though the RX-717VTN memorizes the settings until you change them).

For actual setting procedures, see page 20 — 22.

Surround Mode	Hall Surround	Dolby Pro Logic	Dolby 3ch Logic
Center Mode	Not used	PHANTOM NORMAL WIDE OFF	NORMAL WIDE OFF
Delay Time	DELAY-1 DELAY-2 DELAY-3	DELAY-1 DELAY-2 DELAY-3	Not used
Center Speaker Level*	Not used		
Rear Speaker Level*			Not used

* Center speaker and rear speaker levels cannot be stored separately for each surround mode.

Specifications

Amplifier

Output Power	At Stereo operation	**105 watts per channel, min. RMS, both channels driven into 8 ohms, 20 Hz to 20 kHz with no more than 0.06% total harmonic distortion.**
	At Surround operation	
	Front Channels	105 watts per channel, min. RMS, driven into 8 ohms at 1 kHz with no more than 0.7% total harmonic distortion.
	Center channel	105 watts, min. RMS, driven into 8 ohms at 1 kHz, with no more than 0.7% total harmonic distortion.
	Rear channels	20 watts per channel, min. RMS, driven into 8 ohms at 1kHz, with no more than 0.7% total harmonic distortion.
Total Harmonic Distortion (8 ohms, 1 kHz)		0.06 %* at 105 watts output (* Measured by JVC Audio Analysis System)
Frequency Response (8 ohms)	PHONO	20 Hz to 20 kHz (±0.5 dB)
	CD, TAPE1, TAPE2, VCR, VIDEO	10 Hz to 30 kHz (±1 dB)
Signal-to-Noise Ratio ('66 IHF/'78 IHF)	PHONO	70 dB/78 dB (at REC OUT)
	CD, TAPE1, TAPE 2, VCR, VIDEO	91 dB/80 dB
RIAA Phono Equalization		±0.5 dB (20 Hz to 20 kHz)
Audio Input Sensitivity/ Impedance (1 kHz)	PHONO	2.7 mV/47 k ohms
	CD, TAPE1, TAPE2, VCR, VIDEO	230 mV/47 k ohms
Audio Output Level	TAPE1, TAPE2, VCR	230 mV
Video Input Sensitivity/ Impedance	VCR, VIDEO	1 Vp-p/75 ohms
Video Output Level	VCR, MONITOR OUT	1 Vp-p (at 1 Vp-p input)
Synchronization		negative
Signal-to-Noise Ratio		45 dB

FM tuner (IHF)

Tuning Range		87.5 MHz to 108.0 MHz
Usable Sensitivity		10.8 dBf (0.95 µV/75 ohms)
50 dB Quieting Sensitivity	Monaural	16.3 dBf (1.8 µV/75 ohms)
	Stereo	38.3 dBf (22.5 µV/75 ohms)
Signal-to-Noise Ratio (IHF-A weighted)	Monaural	80 dB at 85 dBf
	Stereo	73 dB at 85 dBf
Total Harmonic Distortion	Monaural	0.15 % at 1 kHz
	Stereo	0.2 % at 1 kHz
Stereo Separation at REC OUT		40 dB at 1 kHz
Capture Ratio		1.5 dB
Alternate Channel Selectivity		60 dB: (±400 kHz)
Frequency Response		30 Hz to 15 kHz: (+0.5 dB, –3 dB)

AM tuner

Tuning Range		530 kHz to 1,710 kHz
Usable Sensitivity	Loop antenna	300 µV/m
	External antenna	30µV
Signal-to-Noise Ratio		50 dB (100mV/m)

General

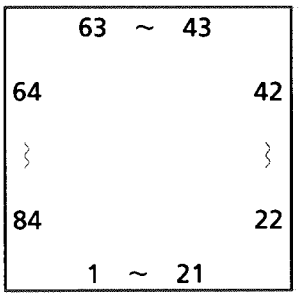
Power Requirements		AC 120V∿, 60 Hz
Power Consumption		330 watts/460 VA 5 watts (in standby mode)
Dimensions (W x H x D)		435 x 156 x 405 mm (17 3/16 x 6 3/16 x 16 inches)
Weight		13 kg (28.7 lbs)

Designs & specifications subject to change without notice.

Description of Major ICs

■ MN172412JYP(IC401) : System Controller

1. Terminal Layout



2. Key Matrix

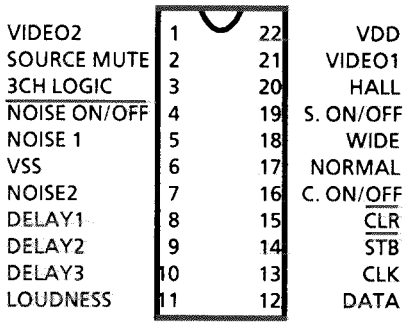
	KEY IN0 (pin7)	KEY IN1 (pin8)	KEY IN2 (pin9)	KEY IN3 (pin10)
KEY OUT 0 (pin1)	POWER (S406)	SEA ON/OFF (S407)	SEA FLAT (S408)	SPI/SEA (S412)
KEY OUT 1 (pin2)	CENTER / PRESET + (S402)	REAR / MODE + (S403)	CURSOR MODE (S404)	SURROUND ON/OFF (S405)
KEY OUT 2 (pin3)	CENTER/ PRESET - (S401)	REAR / MODE - (S424)	SURROUND MODE (S425)	CENTER MODE (S426)
KEY OUT 3 (pin4)	LOUNESS (S414)	CHARACTER (S415)	TUNING (S416)	PRESET (S417)
KEY OUT 4 (pin5)	FM MODE (S418)	ENTER (S419)	TAPE2 (S420)	CSRP (S421)

3. Terminal Description

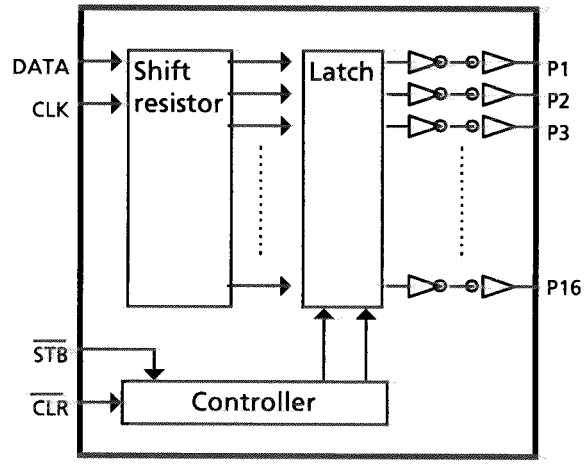
Pin	symbol	I/O	Function and Operations	Pin	symbol	I/O	Function and Operations
1	KO0	O	Key matrix output	43	DATA	O	Data output(to IC252,321341,605)
2	KO1	O	Key matrix output	44	INH IN	I	Inhibit signal input
3	KO2	O	Key matrix output	45	CLK(PLL)	O	Clock output (To IC102)
4	KO3	O	Key matrix output	46	DATA IN(PLL)	I	Data from PLL synthesizer (From IC102)
5	KO4	O	Key matrix output	47	DATA OUT(PLL)	O	PLL synthesizer control data (To IC102)
6	KO5	O	Key matrix output	48	REMOCON IN	I	Remote control signal input
7	KI0	I	Key matrix input	49	GND	--	GND
8	KI1	I	Key matrix input	50	STEREO IN	I	Stereo indication signal input
9	KI2	I	Key matrix input	51	TUNED IN	I	Tuned indication signal input
10	KI3	I	Key matrix input	52	CE(PLL)	O	Chip select signal (To IC102)
11	D9	O	FL grid control output	53	CS(XR1095CP)	O	Chip select signal (To IC404)
12	D8	O	FL grid control output	54	SP CLK(XR1095CP)	O	Clock output (To IC404)
13	D7	O	FL grid control output	55	SP DATA(XR1095CP)	O	Data output(to IC404)
14	D6	O	FL grid control output	56	DCS IN	I	DCS signal input
15	D5	O	FL grid control output	57	DCS OUT	O	DCS signal output
16	D4	O	FL grid control output	58	SOURCE E.IN1	I	R. Encorder control signal input (SORCE)
17	D3	O	FL grid control output	59	SOURCE E.IN2	I	R. Encorder control signal input (SORCE)
18	D2	O	FL grid control output	60	TUNER E.IN1	I	R. Encorder control signal input (TUNER)
19	D1	O	FL grid control output	61	TUNER E.IN2	I	R. Encorder control signal input (TUNER)
20	SEA	O	Indicator drive	62	AC POWER	O	Power primary control signal
21	SURROUND	O	Indicator drive	63	TUNER MUTE	O	Tuner muting control
22	GND	-	GND	64	TV CONT.	I	AV COMPULINK
23	VPP	-	Power supply for FL Display	65	TV OUT	O	AV COMPULINK
24	S1	O	FL segment control output	66	VCR OUT	O	AV COMPULINK
25	S2	O	FL segment control output	67	VCR IN	I	AV COMPULINK
26	S3	O	FL segment control output	68	RST	I	Reset signal input
27	S4	O	FL segment control output	69	X1	--	Connected to GND
28	S5	O	FL segment control output	70	X2	--	Non connection
29	S6	O	FL segment control output	71	VSS	--	Connected to GND
30	S7	O	FL segment control output	72	OSC2	--	Clock oscillation output
31	S8	O	FL segment control output	73	OSC1	--	Clock oscillation input
32	S9	O	FL segment control output	74	VDD	--	+5V
33	S10	O	FL segment control output	75	CHIP SELECT	--	
34	S11	O	FL segment control output	76	VOLUME DOWN	O	Volume control signal
35	S12	O	FL segment control output	77	VOLUME UP	O	Volume control signal
36	S13	O	FL segment control output	78	VOLUME LED	O	Indicator drive
37	S14	O	FL segment control output	79	STAND-BY LED	O	Indicator drive
38	S15	O	FL segment control output	80	SEA ON	O	SEA ON/OFF control signal
39	S16	O	FL segment control output	81	VIDEO OFF	O	VIDEO OFF control signal
40	STB2	O	Strobe signal output (To IC605)	82	STB 3	O	Strobe signal (To IC252)
41	CLK	O	Clock for data transmission	83	TAPE2 MONITOR	O	TAPE2 control signal
42	STB1	O	Strobe signal (To IC341, 321)	84	NC	--	

■ NJU3715L (IC605) : 16-BIT Serial-parallel converter

1. Terminal layout



2. Internal Block Diagram



P1	C. ON/OFF
P2	NORMAL
P3	WIDE
P4	SURR. ON/OFF
P5	HALL
P6	VIDEO1
P7	VIDEO2
P8	SOURCE MUTE
P9	3CH. LOGIC
P10	NOISE ON/OFF
P11	NOISE1
P12	NOISE2
P13	DELAY1
P14	DELAY2
P15	DELAY3
P16	LOUDNESS

3. Terminal Description

Pin No.	Function
1~5, 7~11, 16~21	Parallel data output
12	Serial data input
13	Clock input (When this terminal is set low level, all of the output become low.)
14	Strobe signal input
15	Clear signal input

4. Function

CLK	STB	CLR	Function
X	X	L	All the data stored in the latch circuit are eliminated. (The data in the shift resistor are not eliminated.)
↑	H	H	Data are inputed synchronizing the rising edge of the clock.
L	L	H	The data in the shift resistor are transmitted to the latch circuit. The data outputed from parallel outputs.
↑	L	H	The data in the shift resistor are shifted synchronizing the rising edge of the clock. (The data outputed from the latch circuit are changed.)

5. Function Table

SURROUND MODE

MODE	Port of IC605					
	SURROUND ON/OFF	3ch LOGIC	HALL OUT	PRO LOGIC LED	3ch LOGIC LED	HALL LED
PRO LOGIC	H	L	L	L	H	H
3CH LOGIC	H	H	L	H	L	H
HALL	H	L	H	H	H	L
OFF	L	L	L	H	H	H

VOLUME CONTROL

MODE	Port of IC605		
	VOLUME UP	VOLUME DOWN	VOLUME LED
UP	H	L	L
DOWN	L	H	L
STOP	L	L	L
MUTE	L	H	BLINKLING

VIDEO CONTROL

MODE	Port of IC605	
	VIDEO 1	VIDEO 2
VCR	H	H
VIDEO	L	H
EXCEPT VCR, VIDEO	L	L
STAND BY	L	L

CENTER MODE

MODE	Port of IC605		
	CENTER ON/OFF	NORMAL	WIDE
PHANTOM	H	H	H
NORMAL	H	L	H
WIDE	H	H	L
OFF	L	L	L

TEST TONE

MODE (NOISE OUT)	Port of IC605	
	NOISE 1	NOISE 2
L-ch	L	L
C-ch	L	H
R-ch	H	L
S-ch	H	H

DELAY TIME

MODE	Port of IC605		
	DELAY 1	DELAY 2	DELAY 3
DELAY-1	H	L	L
DELAY-2	L	H	L
DELAY-3	L	L	H

DOLBY TEST

MODE	Port of IC605
	NOISE ON//OFF
ON	L
OFF	H

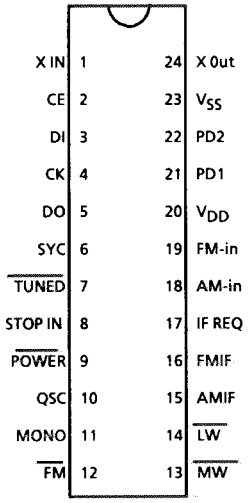
LOUDNESS

MODE	Port of IC605
	LOUDNESS
ON	L
OFF	H

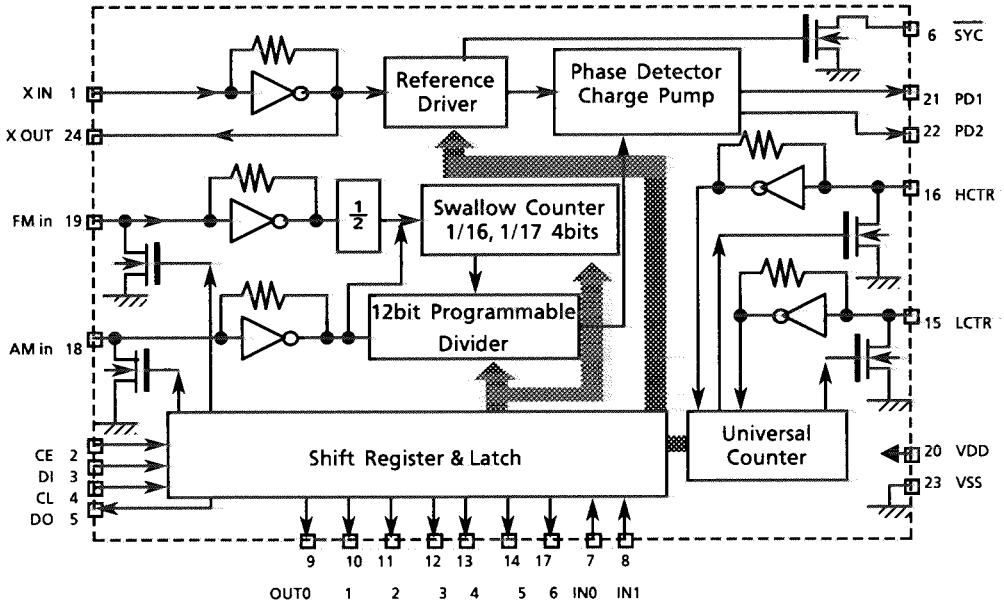
■ LC7218 (IC102) : PLL Synthesizer

1. The main function descriptions
   (1) It makes the local oscillation frequency by the control data from IC401.
   (2) Decode the control signal and transmit the signal for receiving conditions.
   (3) For the best tuning, count the internal-frequency and transmit the data to IC401.

2. Terminal Layout



3. Block Diagram



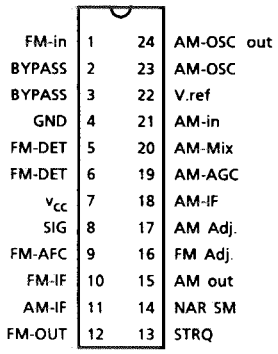
4. Pin Function Description

Pin No.	Symbol	I/O	Functions and Operations
1,24	X in , X out	I/O	Crystal oscillator (7.2MHz).
2	CE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data.
3	DI	I	Receive the control data from the controller (IC401).
4	CL	I	This clock is used to synchronize data when transmitting the data of DI and DO.
5	DO	O	Transmit the data from LC7218 to the controller which is synchronized with CL.
6	$\overline{SYC}$	--	Not used.
7	TUNED	I	Receive the tuned signal from IC104 (LA1266A).
8	STOP IN	--	Not used.
9	POWER	--	Non connection
10	QSC	--	ON mode with " H " and OFF mode with " L ". (Non connection)
11	MONO	O	It is "H" on FM-monaural, "L" on FM-Stereo.
12	FM	O	It is "L" on FM mode.
13	MW	O	It is "L" on MW mode.
14	LW	O	It is "L" on LW mode.
15	AM-IF	I	Universal counter input for AM-IF from IC104 (LA1266A).
16	FM-IF	I	Universal counter input for FM-IF from IC104(LA1266A).
17	IF REQ	O	Output the "IF-signal request" to IC104 when the pin-7 (tuned in) go to "H".
18	AM in	I	Input the local oscillator signal of AM.
19	FM in	I	Input the local oscillator signal of FM.
20	V_{DD}	--	Power supply terminal .
21	PD1	O	PLL charge pump output : When the local oscillator signal frequency is higher than the reference frequency high level signals will output. When it is lower than the reference frequency, low level signals will output. When it is same as reference frequency signals, it will be floating.
22	PD2	--	Non connection
23	Vss	--	Power supply.

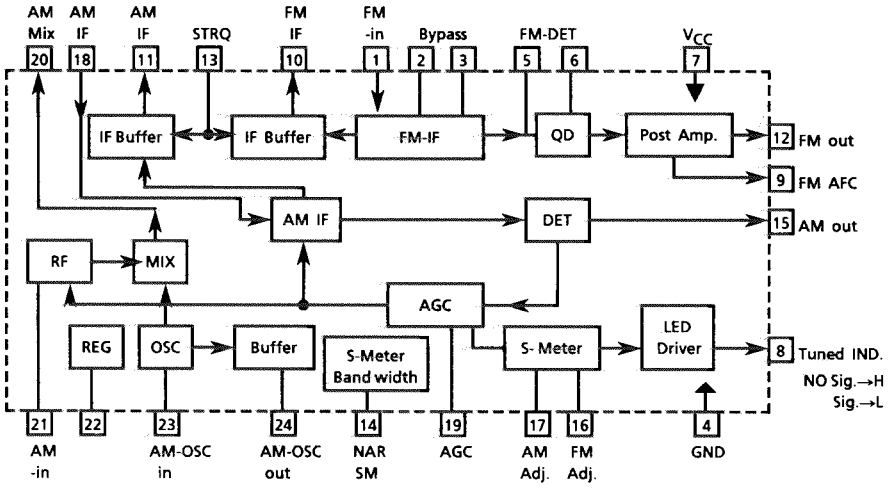
■ LA1266A (IC104) : FM AM IF AMP & detector

1. The main function descriptions
   (1) Amplify and detect of FM intermodulation frequencies.
   (2) It has local oscillator and mixer for AM, and amplify the AM-IF signal.

2. Top View


FM-in 1 24 AM-OSC out
BYPASS 2 23 AM-OSC
BYPASS 3 22 V.ref
GND 4 21 AM-in
FM-DET 5 20 AM-Mix
FM-DET 6 19 AM-AGC
Vcc 7 18 AM-IF
SIG 8 17 AM Adj.
FM-AFC 9 16 FM Adj.
FM-IF 10 15 AM out
AM-IF 11 14 NAR SM
FM-OUT 12 13 STRQ

3. Block Diagram



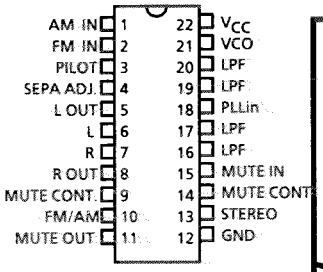
4. Pin Function Description

Pin No.	Symbol	I/O	Functions and Operations
1	FM in	I	Input terminal for FM signal.
2,3	BYPASS	--	Bypass of FM IF Amp.
4	GND	--	Device ground terminal.
5,6	FM DET	--	FM detect transformer.
7	V_{CC}	--	Power supply terminal.
8	SIG	O	Whe the set is tunning ,this terminal become "L".
9	FM AFC	O	Output terminal of voltage for FM - AFC.
10	FM IF	O	When the signal of IF REQ of IC102(LC7218) applied to pin17, the signal of FM IF does output.
11	AM IF	O	When the signal of IF REQ of IC102(LC7218) applied to pin17, the signal of AM IF does output.
12	FM OUT	O	FM detection output.
13	STRQ	I	The IF-signals come out from pin10 (FM-IF) or pin11 (AM-IF) while this terminal going to "High".
14	NAR SM	--	Control the Band-width of signal meter.
15	AM out	O	AM detection output.
16	FM Adj.	--	FM stop level (or mute level) adjust.
17	AM Adj.	--	AM stop level (or mute level) adjust.
18	AM-IF	I	AM IF Signal input.
19	AM-AGC	I	AGC voltage Input terminal for AM.
20	AM-MIX	O	Output terminal for AM mixer.
21	AM-IN	I	Input terminal for AM RF Signal.
22	V.REF	--	Band-width control of FM signal meter.
23	AM-OSC	--	AM Local oscillation circuit.
24	AM-OSC OUT	O	AM Local Oscillation Signal output.

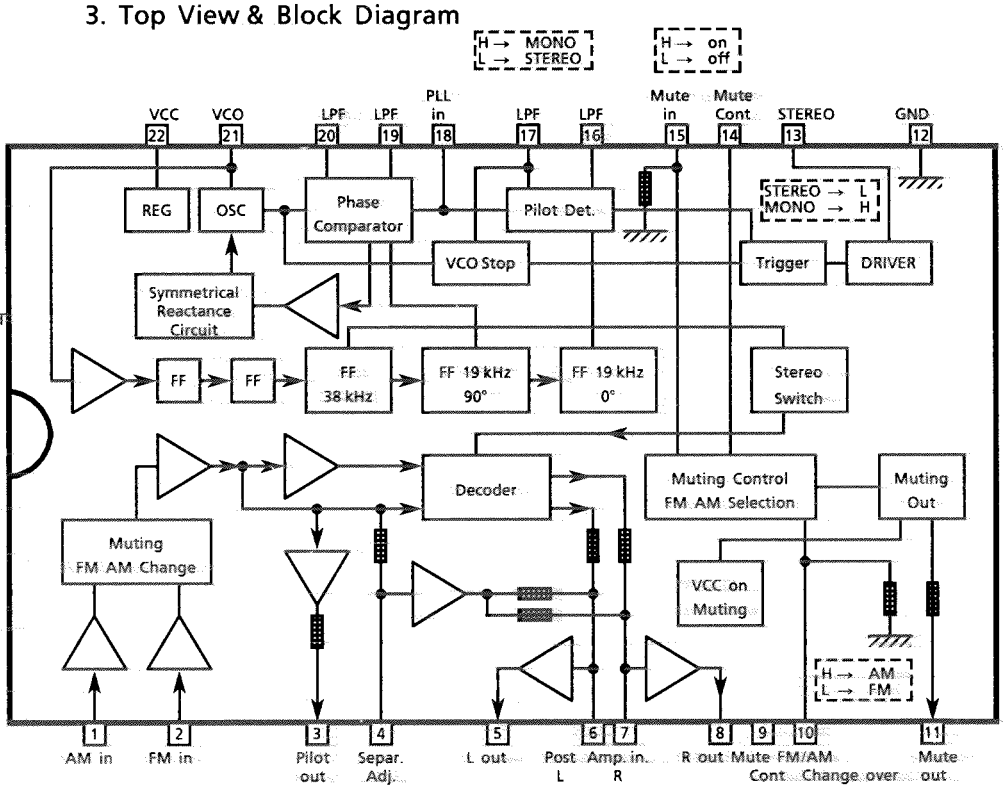
■ LA3401 (IC105) : FM MPX Detector

1. The main function descriptions
   (1) Detect the FM Multiplex Signal (Stereo signal).
   (2) When receiving FM Stereo Signal, it outputs the signal for indicator.
   (3) AM / FM Audio Amplifier.

2. Terminal Layout



3. Top View & Block Diagram

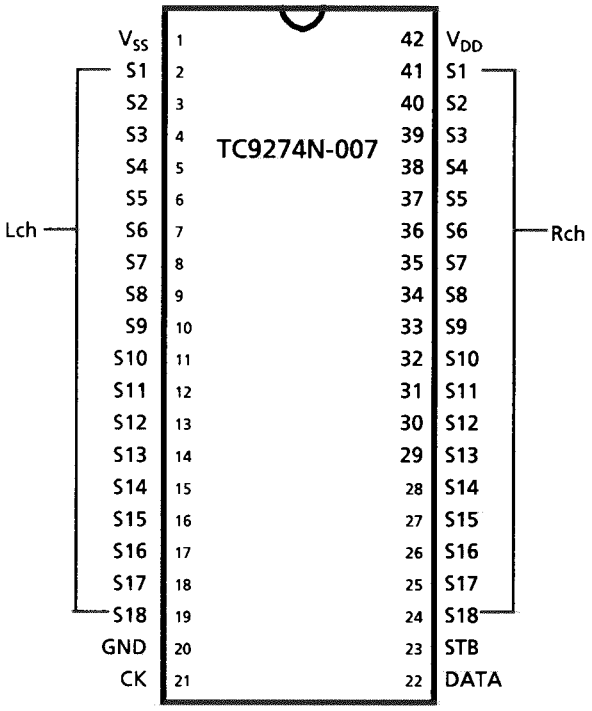


4. Pin Function Description

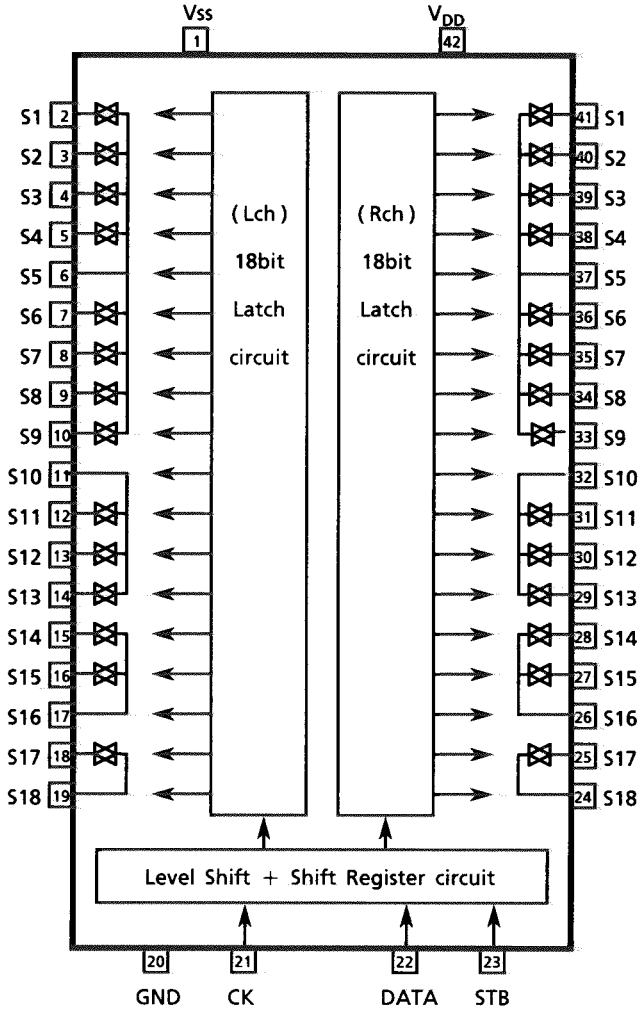
Pin No.	Symbol	I/O	Functions and Operations
1	AM in	I	Input terminal for AM detection signal.
2	FM in	I	Input terminal for FM detection signal.
3	PILOT OUT	O	Output of MPX pilot signal (Connect to Pin18).
4	SEPA. ADJ.	--	Separation adjustment.
5	L-out	O	Left channel signal output.
6	L	O	Reversal output of Pin5.
7	R	O	Reversal output of Pin8.
8	R-out	O	Right channel signal output
9	MUTE CONT	--	The mute time is controlled by the connected capacitor when turning the power switch on.
10	FM / AM	I	Change over the FM / AM input. "H" : AM, "L" : FM
11	Mute out	---	Not used
12	GND	--	Ground terminal.
13	STEREO	O	Stereo indicator output. Stereo : "L", Mono : "H"
14	MUTE CONT	--	The mute time is controlled by the connected capacitor when changing over the FM / AM .
15	MUTE IN	I	Mute signal input. "H" : Mute on, "L" : Mute off.
16	LPF	--	Low pass filter of pilot detector.
17	LPF	--	While this terminal goes to "H", the VCO stop.
18	PILOT IN	I	PLL input.
19	LPF	--	Low-pass filter of PLL.
20	LPF	--	Low-pass filter of PLL.
21	VCO	I	Voltage controlled oscillator terminal.
22	V_{CC}	--	Power supply.

TC9274N - 007 (IC321) : Analog Switch Array

1. Terminal Layout



2. Block Diagram



3. Pin Functions

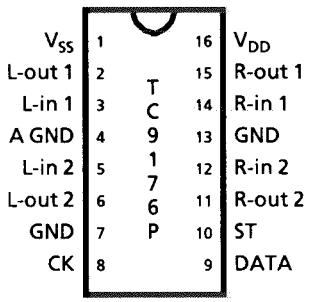
Pin No.	Symbol	I/O	Functions and Operations
1	V_{SS}	--	Power Supply .
2~19	S1~S18	I/O	Input / Output Terminal.
20	GND	--	Digital Ground.
21	CK	I	Clock Input Terminal.
22	DATA	I	Data Input Terminal.
23	STB	I	Strobe Input Terminal.
24~41	S18~S1	I/O	Input / Output Terminal.
42	V_{DD}	--	Power Supply .

■ TC9176P (IC341) : Volume Control

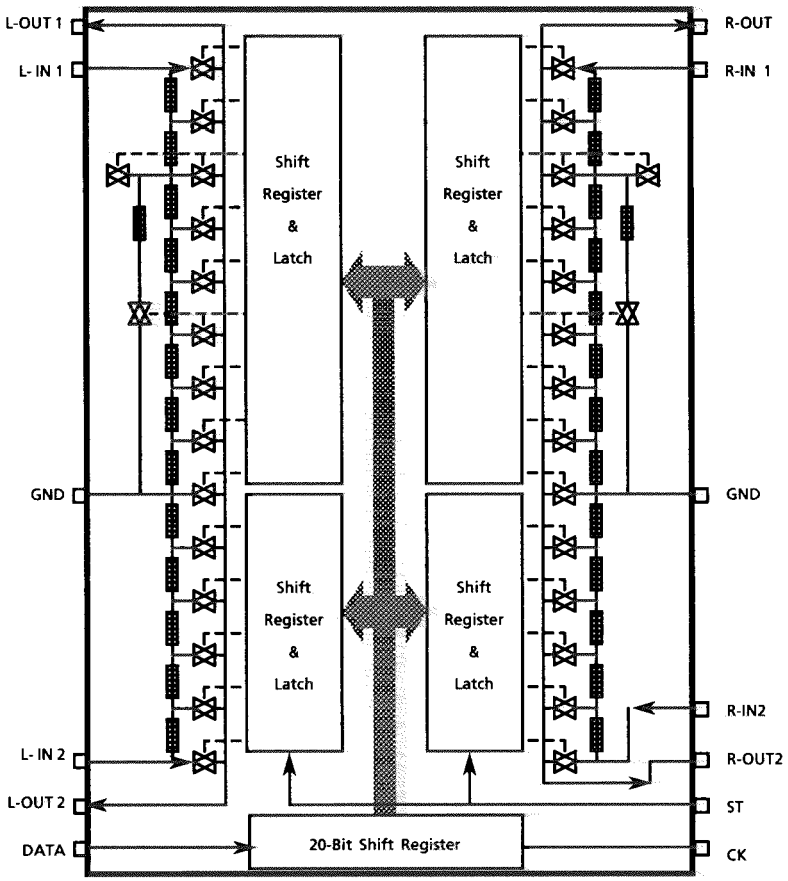
1. Functions

This is used for Volume Control.
The attenuation levels are 0 to −76dB, with 2dB step.

2. Terminal Layout



3. Block Diagram



Arrangement of data

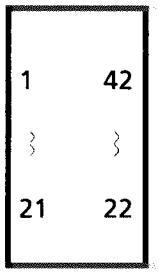
TC9176	Lch	Rch	0	0dB	-2dB	-4dB	-5dB	-6dB	-8dB	-9dB	-10dB	-20dB	-30dB	-40dB	-50dB	-60dB	-70dB	0	0	0	1
																		Chip Select			

4. Pin Functions

Pin No.	Symbol	I/O	Functions and Operations
1	V_{SS}		Power Supply -15V.
2	L-out1	O	10dB step attenuator output.
3	L-in1	I	10dB step attenuator input.
4	A GND		Ground.
5	L-in2	I	2dB step attenuator input (left).
6	L-out2	O	2dB step attenuator output (left).
7	GND		Ground.
8	CK	I	Clock input.
9	DATA	I	Serial data input is to decide the level of attenuation.
10	ST	I	Strobe input.
11	R-out2	O	2dB step attenuator output (Right).
12	R-in2	I	2dB step attenuator input (Right).
13	GND		Ground.
14	R-in1	I	10dB step attenuator input.
15	R-out1	O	10dB step attenuator output.
16	V_{DD}		Power Supply +15V.

■ XR1095CP (IC404): Graphic Equalizer Filter & Display driver

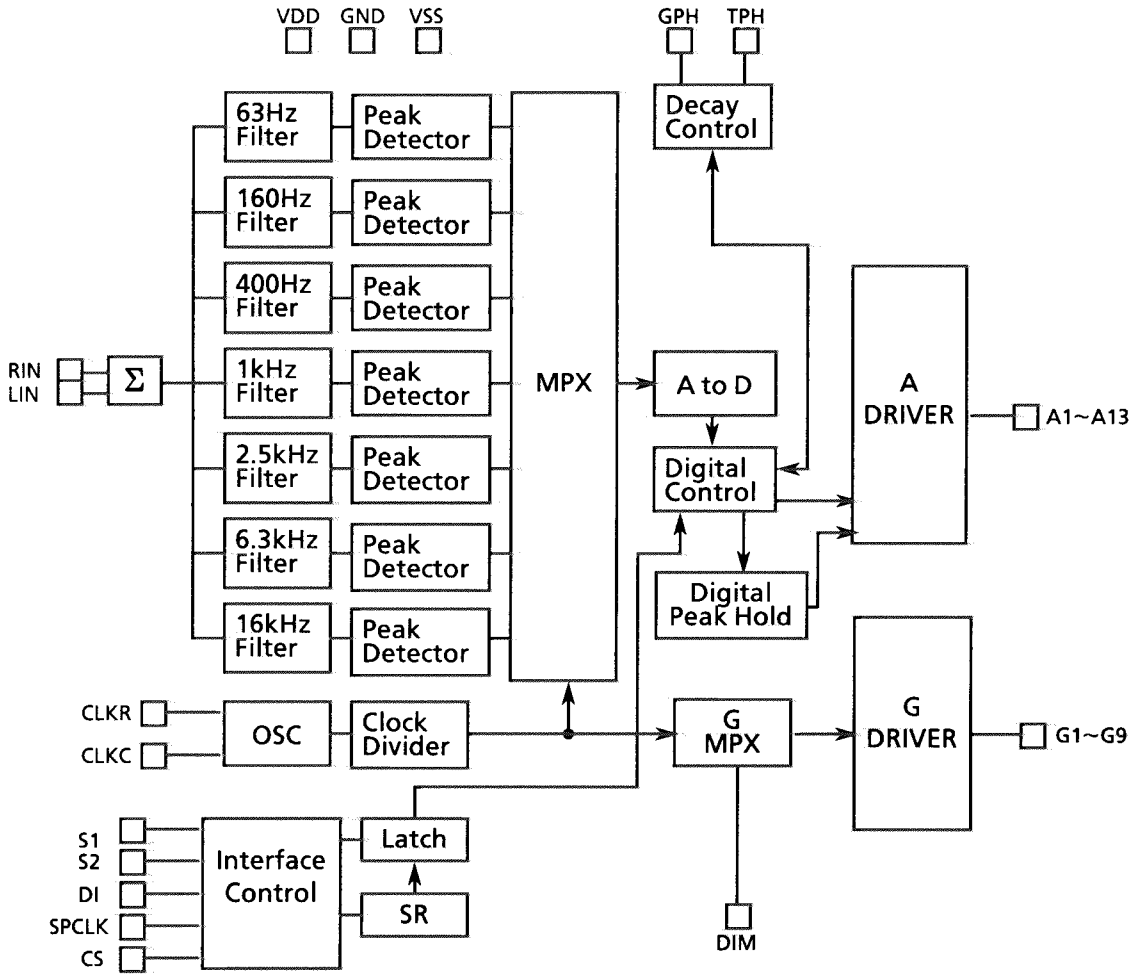
1. Terminal Layout



2. Pin function

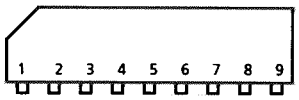
Pin No.	Symbol	Function
1~5,9~16	A1~A13	Anode terminal
30~38	G1~G9	Grid terminal
25	RIN	Right channel input
26	LIN	Left channel input
22	DIM	Brightness control varies width of G outputs.
27	GPH	Filter amplitude display duration control. A resistor and timing capacitor from this pin to VSS adjust Peak Hold Decay Time.
28	TPH	Total output display on / off control.
40	CLKR	Oscillator timing resistor between this pin and CLKC pin.
41	CLKC	Oscillator timing capacitor between this pin and VSS.
20	S1	Chip select 1 pin.
21	S1	Chip select 2 pin.
19	DI	Serial port data.
18	SPCLK	Serial port clock.
17	CS	Chip Select.
42	VDD	Plus supply, nominally 5VDC.
23	VSS	Minus supply, nominaly −5VDC.
24	GND	Analog input reference.

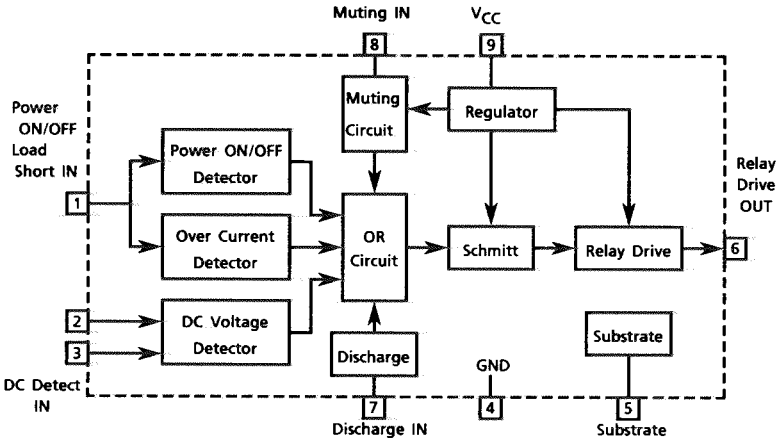
3. Block Diagram



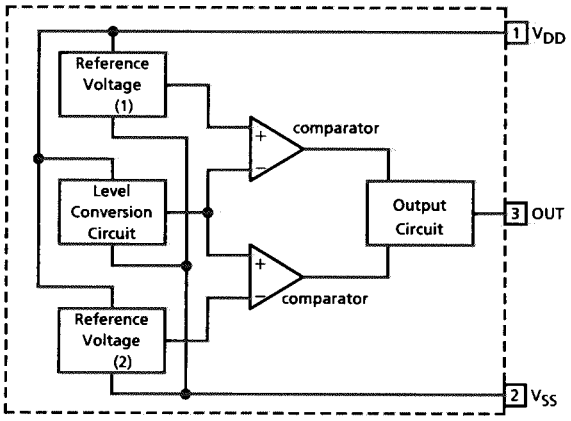
Internal Block Diagram of the Other ICs

■ TA7317P (IC901) : Protector



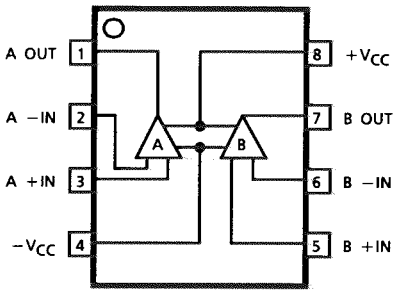


■ MN1281(P.Q) (IC403) : Reset IC

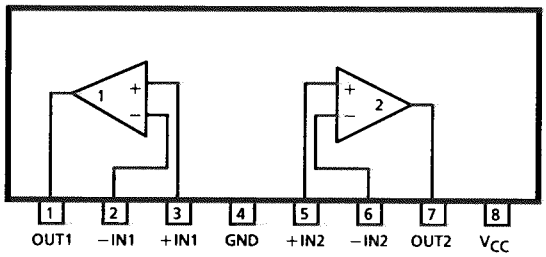


Pin No.	Pin Name	Functions
1	V_{DD}	Power supply
2	V_{SS}	Ground
3	OUT	Reset signal output : Low level is output when resetting : High level is output when cancelling the reset.

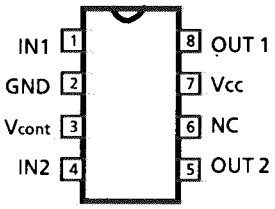
■ NJM4580DD (IC301) : Dual OP Amplifier



■ BA15218N (IC311,IC511) : Dual OP Amplifier

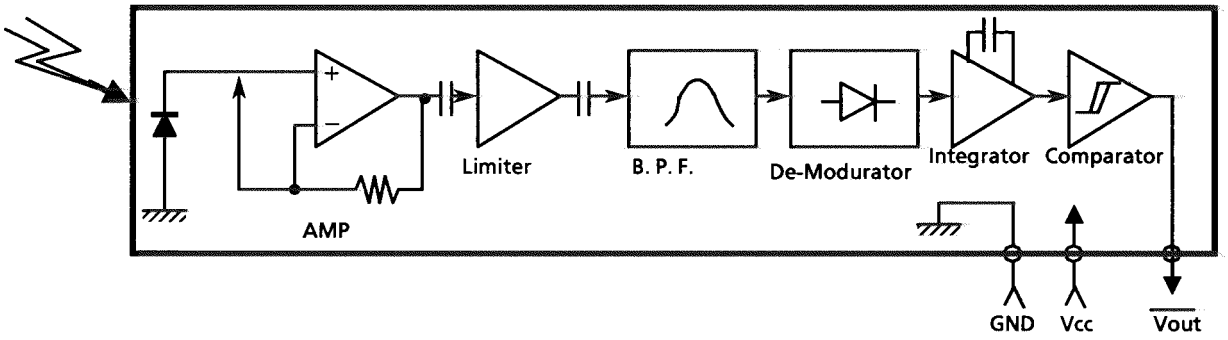


■ LB1639-CV (IC361) : Motor Driver

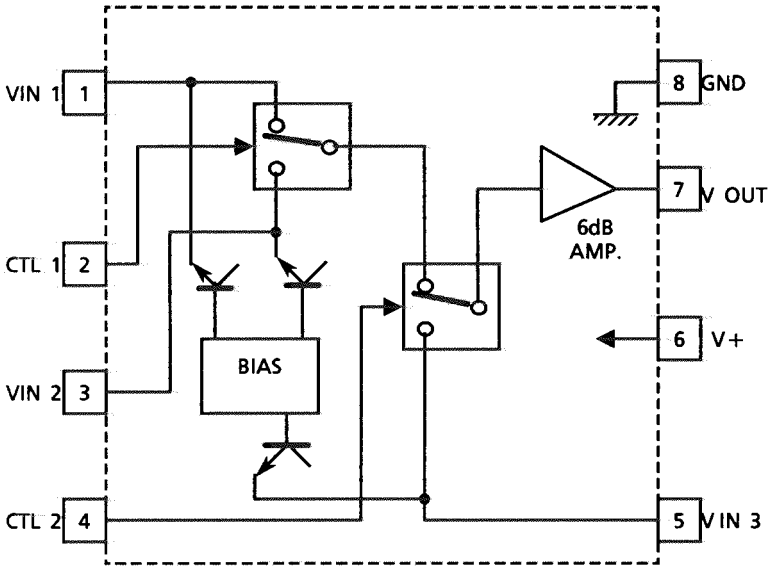


IN 1	IN 2	OUT 1	OUT 2	MOTOR
H	L	H	L	CLOCKWISE
L	H	L	H	COUNTER-CLOCKWISE
H	H	OFF	OFF	WAITING
L	L	OFF	OFF	WAITING

■SPS-420-1 (IC402) : Remote Control Module IC



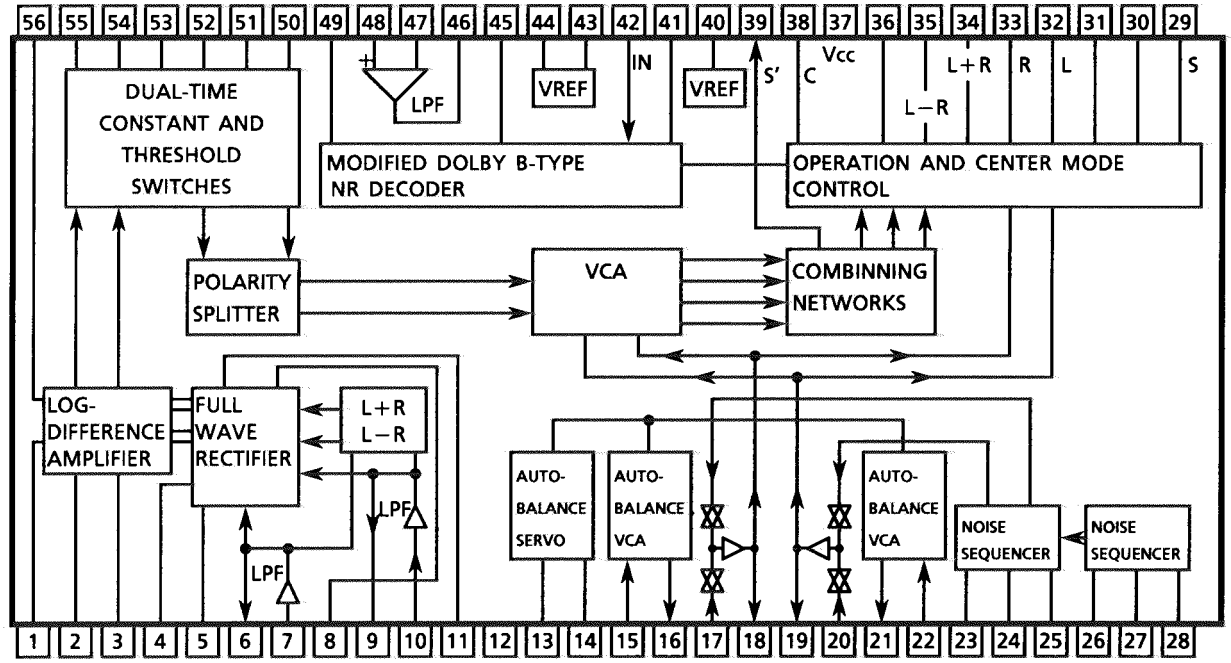
■NJM2246D (IC561) : Video Switch



Control Signal—OutputSignal

CTL 1	CTL 2	Output
L	L	V IN 1
H	L	V IN 2
L / H	H	V IN 3

■ NJM2177L (IC601) : Dolby Pro Logic



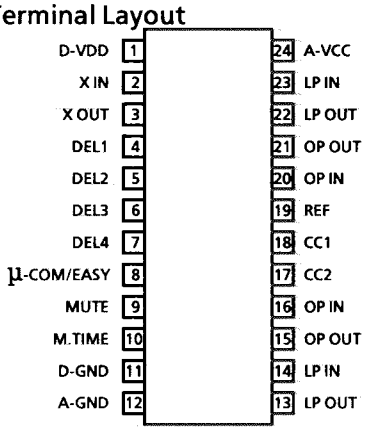
■ M50198P(IC602) : Digital Delay IC

1. Explanation of the operation

Audio signal is input to LPF1 to reduce the high frequency components. The output from LPF1 is coded to 1 bit signal by ADM modulator and comparator with inside .This digital signal is input to main control logic. And this signal obtain various effect,and is written in SRAM .At the same time main control logic read the data from SRAM ,and input it to ADM demodulator .The ADM demodulator converts 1bit signal to analog signal.The analog signal is input to LPF2 to reduce the suprius components,and output to Pin 13.

LPF1	Reject the high frequency components which is contained the input signal and unnecessary.
LPF2	Reject the suprius components which is generated by the ADM demodulation by using with comparator.
OP1,CC1	For ADM modulator.
OP2,CC2	For ADM demodulator.

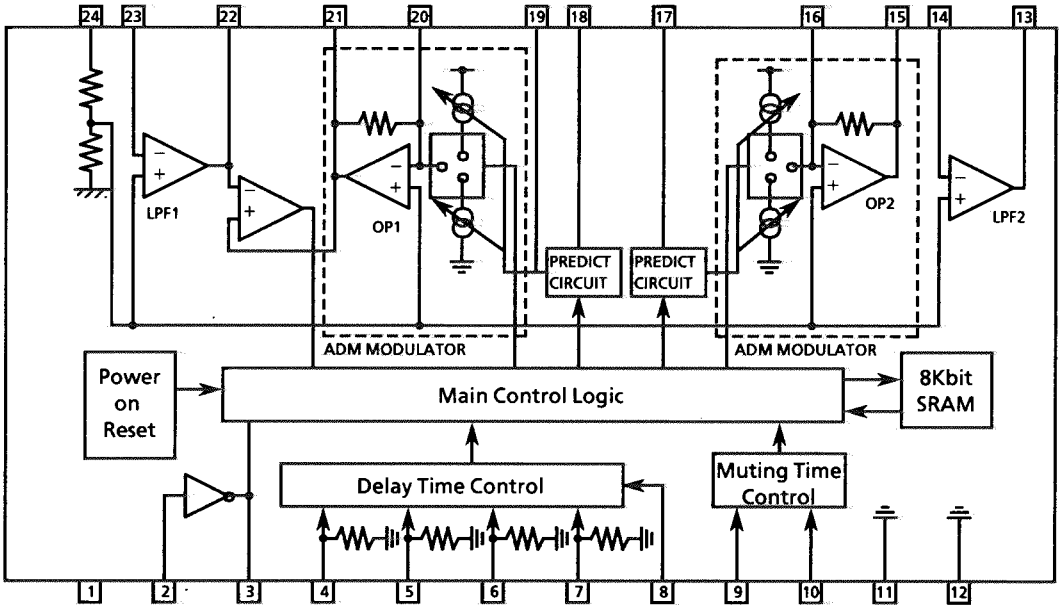
2. Terminal Layout



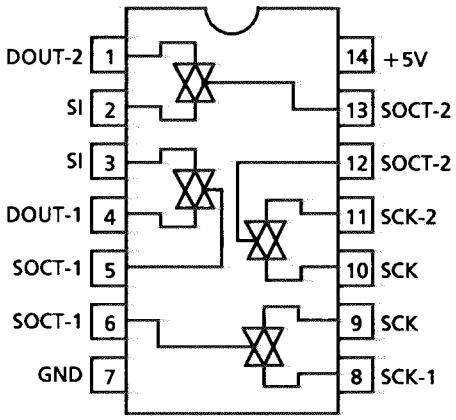
3.Pin function Description

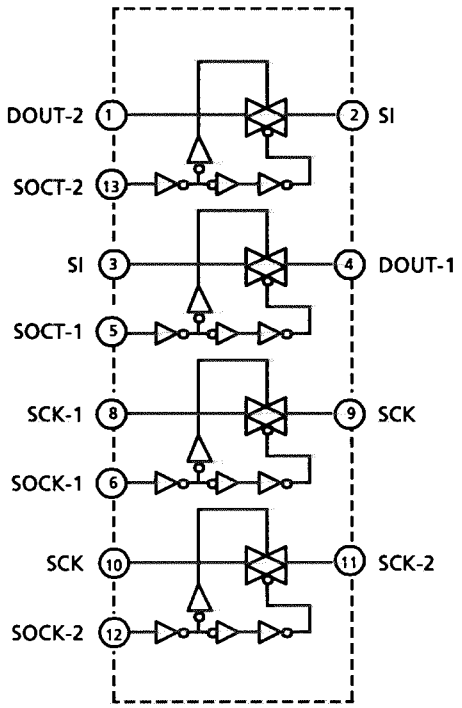
Pin No	Symbol	Function	Pin No	Symbol	Function
1	D-VDD	Power Supply	13	LP OUT	Output of LPF
2	X IN	Oscillation Terminal	14	LP IN	Input of LPF
3	X OUT	Oscillation Terminal	15	OP OUT	Integrator output
4	DEL1	Delay time control	16	OP IN	Integrator input
5	DEL2	〃	17	CC2	Current control
6	DEL3	〃	18	CC1	〃
7	DEL4	Connected to GND	19	REF	1/2 Vcc
8	μCOM/EASY	〃	20	OP IN	Integrator input
9	MUTE	〃	21	OP OUT	Integrator output
10	M.TIME	〃	22	LP OUT	Output of LPF
11	D-GND	〃	23	LP IN	Input of LPF
12	A-GND	〃	24	A-VCC	Power supply

4. Block Diagram



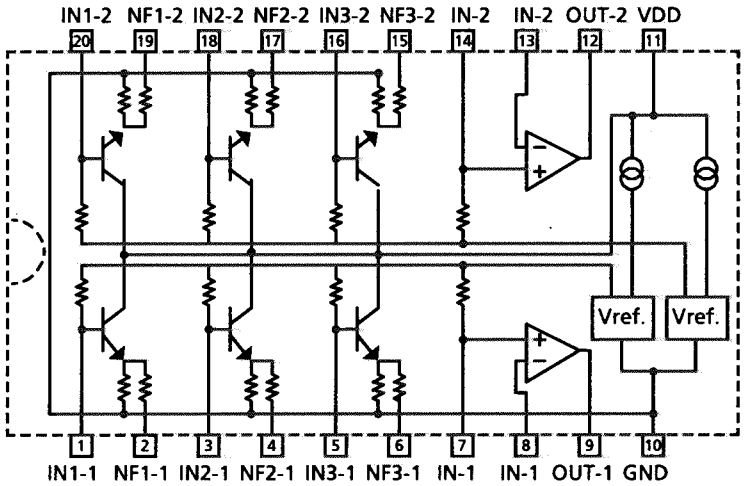
■ TC4066P :IC680 (Analog Switch)





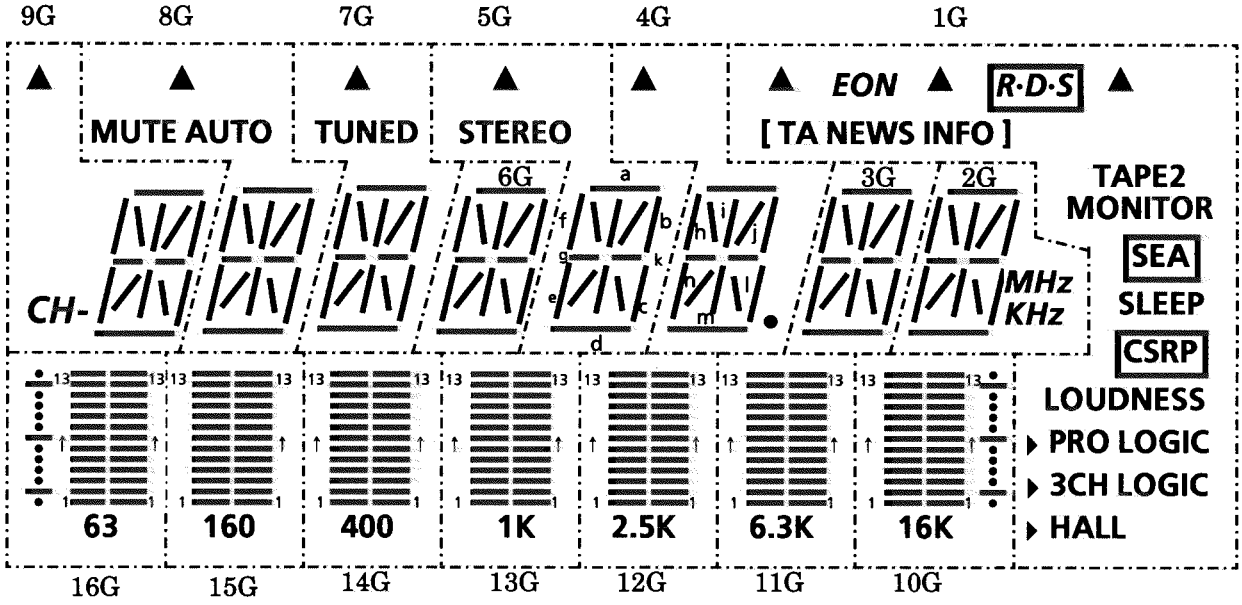
■ M5243 (IC251) : S.E.A. Graphic Equalizer

1. Functions
   It makes inductive characteristic instead of coil.



Internal Connections of the FL Display

■ELU0001-184 : FL401



Pin Connection

Upper

PIN NUMBER	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
ELECTRODE	F2	F2	F2	NP	NP	NP	NP	NP	NP	NP	P16 (S16)	P15 (S15)	P14 (S14)	P13 (S13)	P12 (S12)	P11 (S11)	P10 (S10)	P9 (S9)	P8 (S8)
PIN NUMBER	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
ELECTRODE	P7 (S7)	P6 (S6)	P5 (S5)	P4 (S4)	P3 (S3)	P2 (S2)	P1 (S1)	1G (D1)	2G (D2)	3G (D3)	4G (D4)	5G (D5)	6G (D6)	7G (D7)	8G (D8)	NP	F1	F1	F1

Lower

PIN NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ELECTRODE	F1	F1	F1	NP	P17 (T1)	P18 (T2)	P19 (T3)	P20 (T4)	P21 (T5)	P22 (T6)	P23 (T7)	P24 (T8)	P25 (T9)	P26 (T10)	P27 (T11)	P28 (T12)	P29 (T13)	16G (1G)	15G (2G)
PIN NUMBER	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
ELECTRODE	14G (3G)	13G (4G)	12G (5G)	11G (6G)	10G (7G)	9G (8G)	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	F2	F2	F2

Note F : Filament, G : Grid, P : Anode, NP : No Pin

Grid - Anode Assignment (1G~9G)

	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	a	▲ (LEFT)
P2	b	b	b	b	b	b	b	b	▲ (CENTER)
P3	i	i	i	i	i	i	i	i	▲ (RIGHT)
P4	j	j	j	j	j	j	j	j	SEA
P5	h	h	h	h	h	h	h	h	TAPE2 MONITOR
P6	f	f	f	f	f	f	f	f	LOUDNESS
P7	k	k	k	k	k	k	k	k	SLEEP
P8	g	g	g	g	g	g	g	g	CSRP
P9	c	c	c	c	c	c	c	c	▸ PRO LOGIC
P10	l	l	l	l	l	l	l	l	▸ 3CH LOGIC
P11	n	n	n	n	n	n	n	n	▸ HALL
P12	m	m	m	m	m	m	m	m	*R·D·S*
P13	e	e	e	e	e	e	e	e	TA
P14	d	d	d	d	d	d	d	d	NEWS
P15	*CH-*	MUTE AUTO	TUNED		STEREO	● (DOT)		*MHz*	INFO
P16	▲	▲	▲		▲	▲		*KHZ*	EON [ ]

Grid - Anode Assignment (10G~16G)

	16G	15G	14G	13G	12G	11G	10G
P17	1	1	1	1	1	1	1
P18	2	2	2	2	2	2	2
P19	3	3	3	3	3	3	3
P20	4	4	4	4	4	4	4
P21	5	5	5	5	5	5	5
P22	6	6	6	6	6	6	6
P23	7	7	7	7	7	7	7
P24	8	8	8	8	8	8	8
P25	9	9	9	9	9	9	9
P26	10	10	10	10	10	10	10
P27	11	11	11	11	11	11	11
P28	12	12	12	12	12	12	12
P29	13	13	13	13	13	13	13

(NOTE) Dots(*) on both side of **63,160,400,1K,2.5K,6.3K** and **16K** are conncted with their each grids. (*)

Disassembly Procedures

■ Removing the Top Cover

1. Remove the 4 screws fastening both sides of the top cover, and the 2 screws fastening the rear side.
2. Remove the top cover.

■ Removing the Bottom Cover

1. Remove the 13 screws Ⓓ and Ⓕ.
2. Remove the bottom cover.

※ The screw Ⓕ which secures the bottom cover is also used for ground. It is necessary to ground before checking after the bottom cover is removed. (See Fig.-4.)

■ Removing the Front Panel

1. Remove the 3 screws Ⓐ fastening top of the front panel, and the 4 screws Ⓔ fastening bottom of the front panel.
2. Remove the master volume knob.
3. Remove the nut fastening the volume.
4. Remove the front panel disconnecting some wires.

■ Removing the Tuner P.C. Board

1. Remove all screws installed at rear panel.
2. Take it out.

※ 6pcs. of the screw Ⓖ which secure the rear panel are also used for ground. Installing of those screws is required before checking.

■ Removing the Power Transistor

1. Remove the bottom cover
2. Unsolder the broken transistor.
3. Remove the screw fastening it.
4. Remove it.

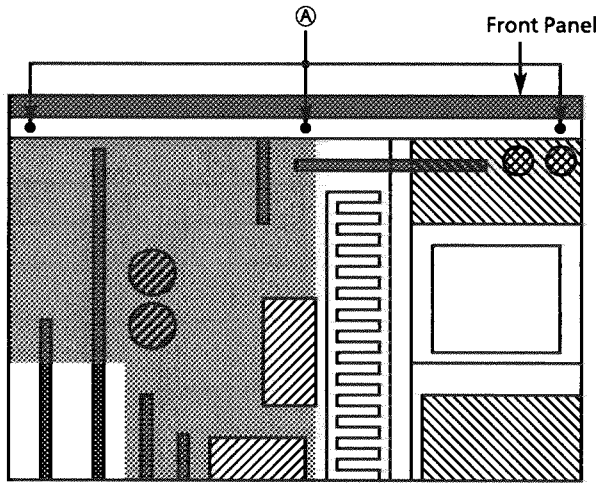


Fig 1. Top View

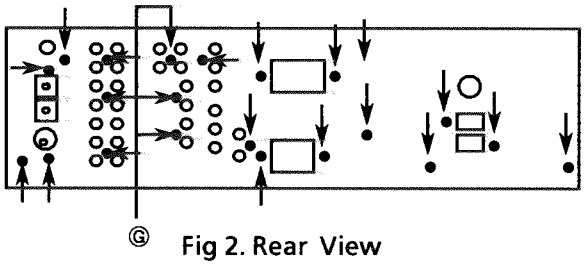


Fig 2. Rear View

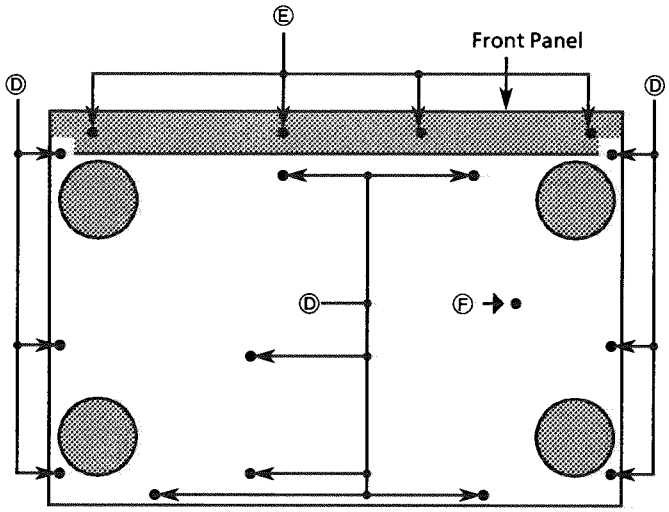


Fig 3. Bottom Cover

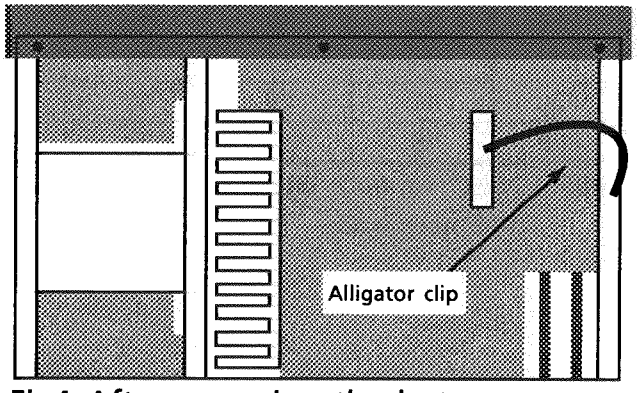


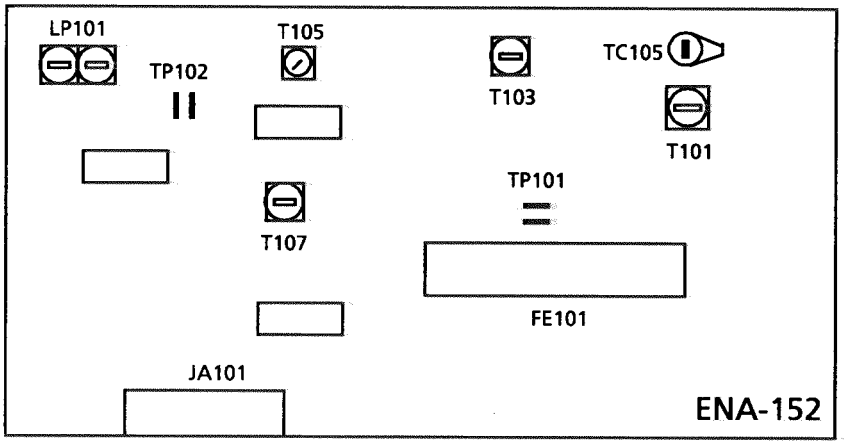
Fig4. After removing the bottom cover

Adjustment Procedures

■ Tuner section

Tuning range

Area	Range	
	MW (kHz)	FM (MHz)
the U.S.A., Canada	530~1710	87.5~108



(1) Tuning voltage
Confirm the voltages in the table below at TP101. If the voltages are not satisfied, replace T101 and T103 for MW, T102 and FE101 for FM.

FM Tuning voltage (Unit : V)

Area	Frequency	
	87.5MHz	108MHz
the U.S.A., Canada	1.6±1.0 (V)	8.0±2.0 (V)

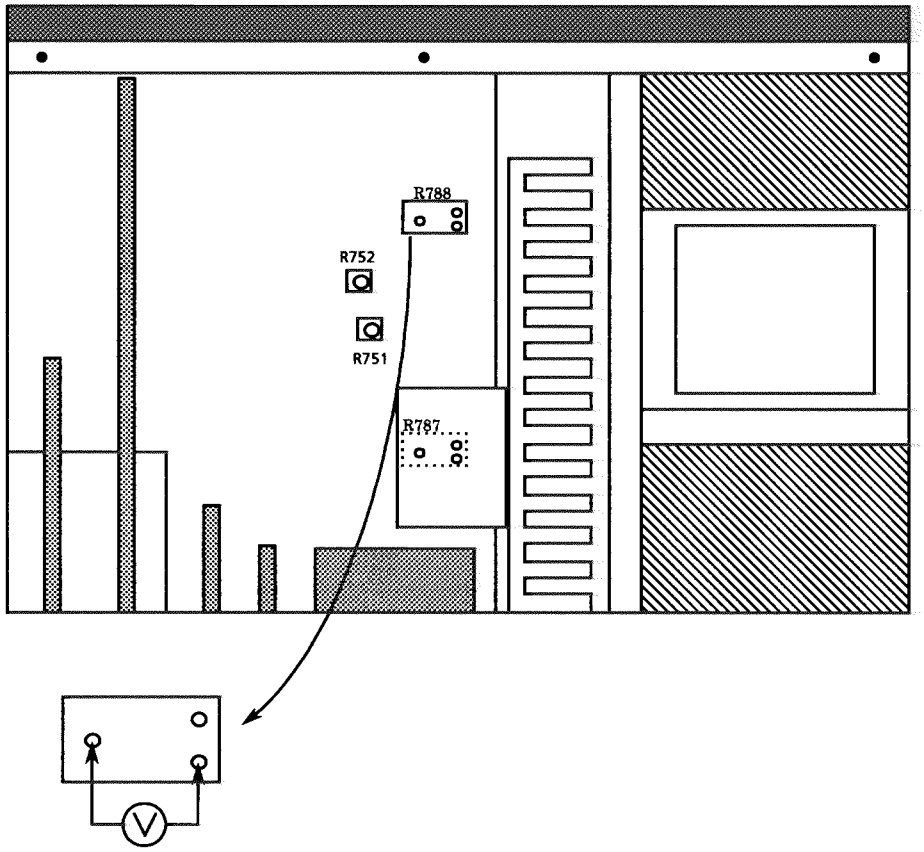
AM Tuning voltage (Unit : V)

Area	Frequency (MW)	
	530kHz	1710kHz
the U.S.A., Canada	1.0±0.2	8.0±0.8

(2) FM center meter
Receive a broadcast by using the function of 'AUTO STOP'.
Adjust T105 (detector coil) so that the voltage at TP102 becomes 0±1.5mV.

(3) MW Tracking
Adjust T101 (antenna coil) to obtain the best receiving sensitivity on 600kHz.
Adjust TC105 (antenna trimmer) to obtain the best receiving sensitivity on 1400kHz.

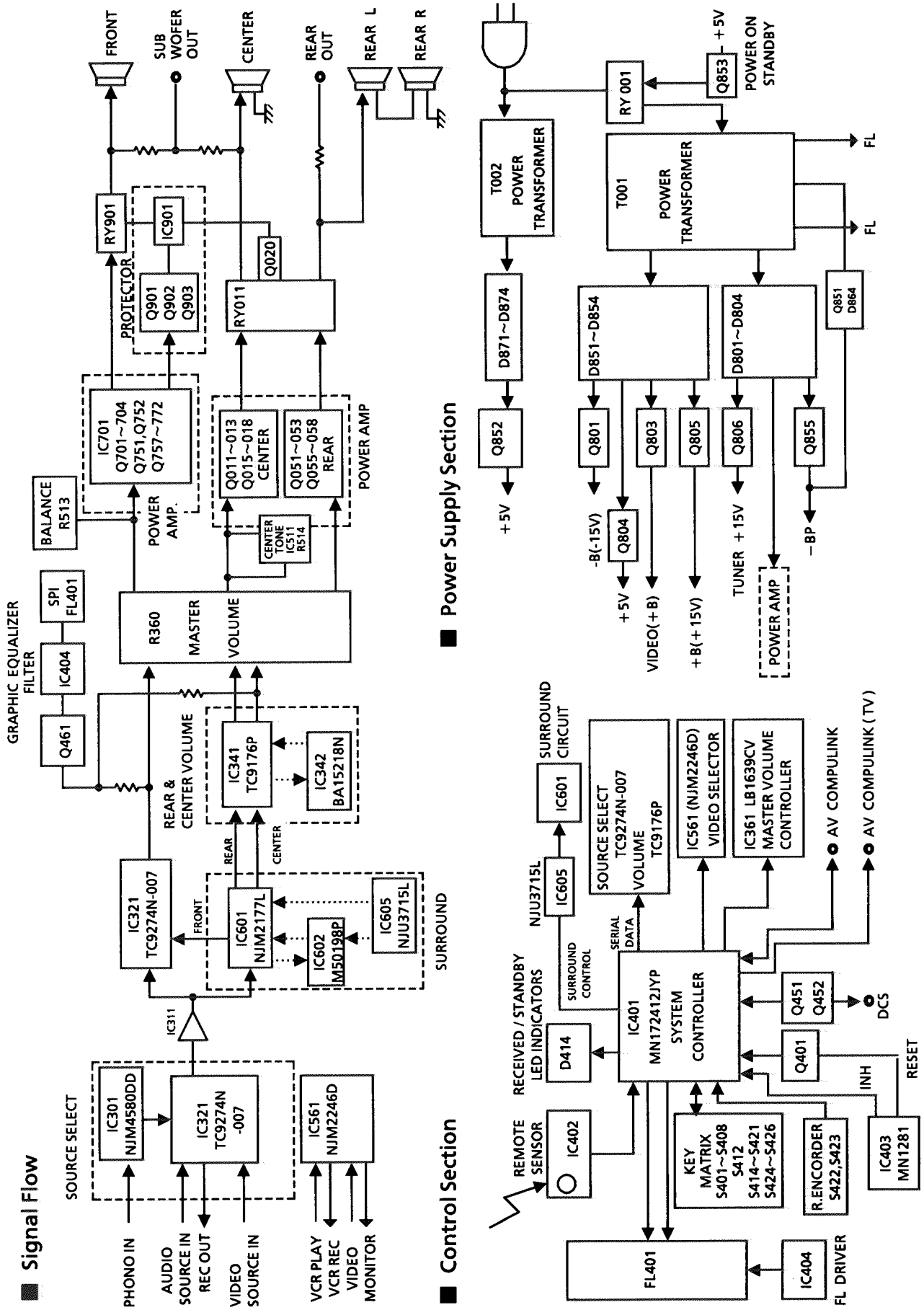
■ Power Amplifier section

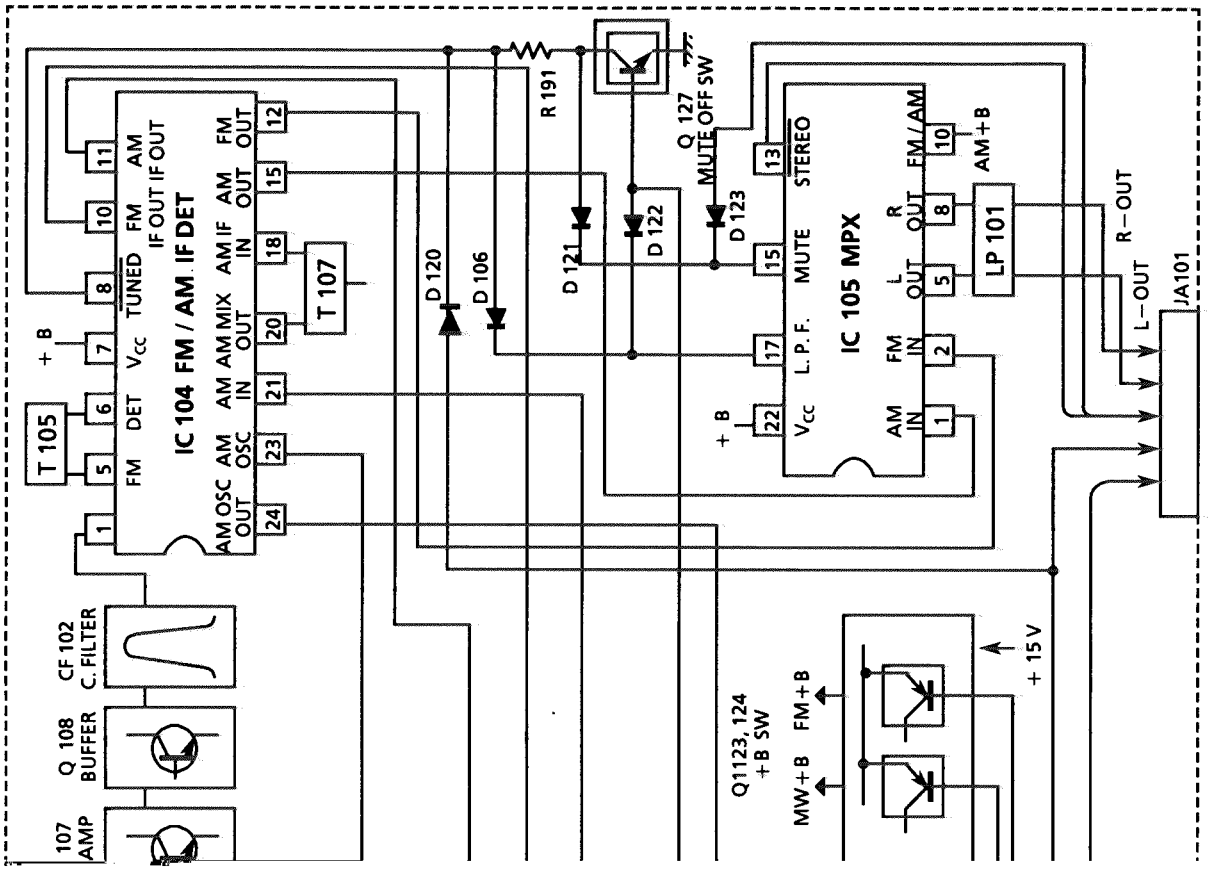


■ Idling Current

(1) Set the volume control to minimum during this adjustment.
(2) Turn R751 and R752 fully counterclockwise before the power switch on.
(3) Always start from cold, and allow 10 minutes to warm up before adjustment. If the heatsink is already warm from previous use the correct adjustment can not be made.
(5) Connect a DC voltmeter to R787 resistor's leads for left channel, or to R788 for right channel.
(6) Adjust R751 for left channel, or R752 for right channel, so that the DC voltmeter becomes 1mV ~ 9mV.

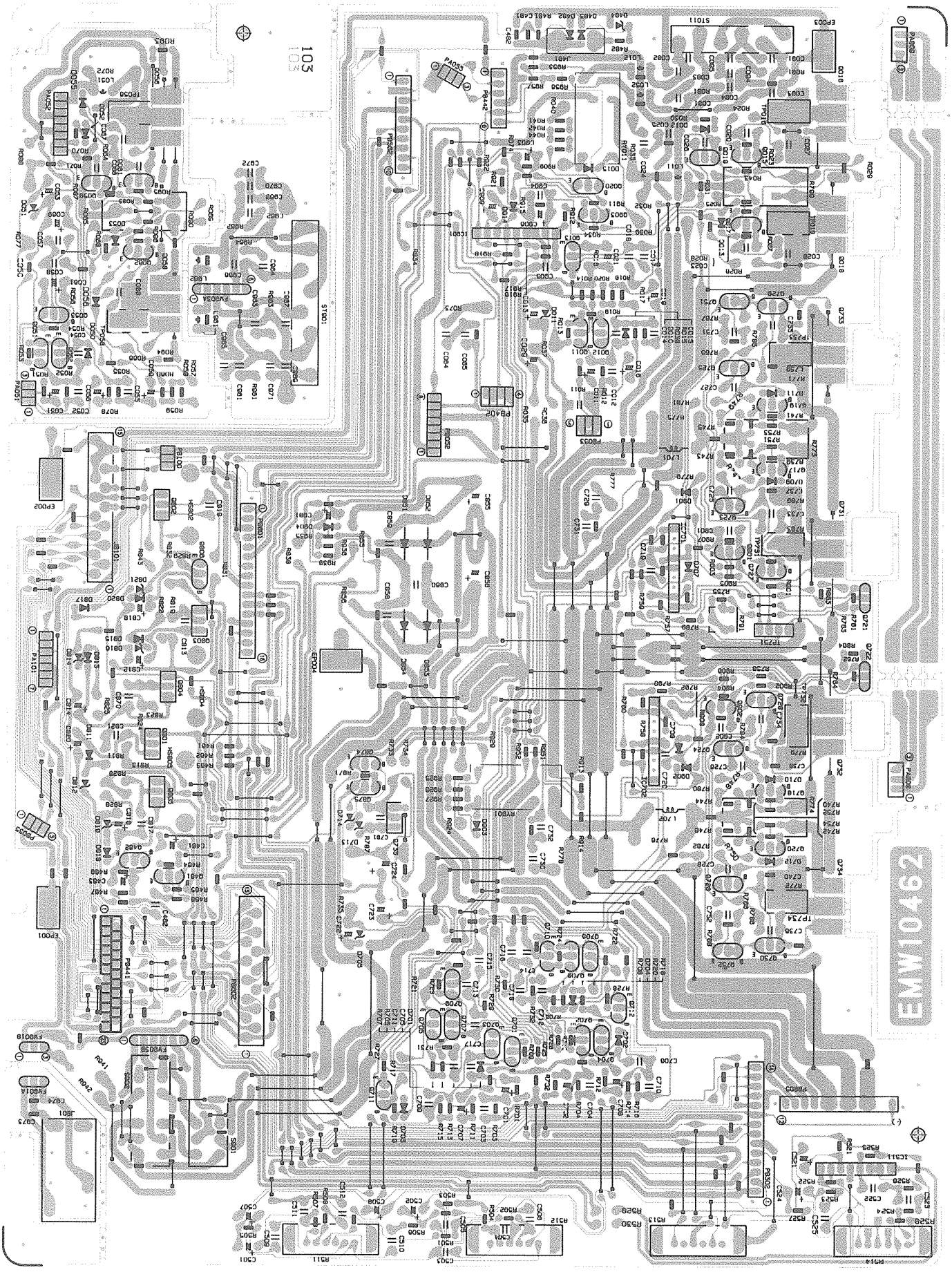
Block Diagrams



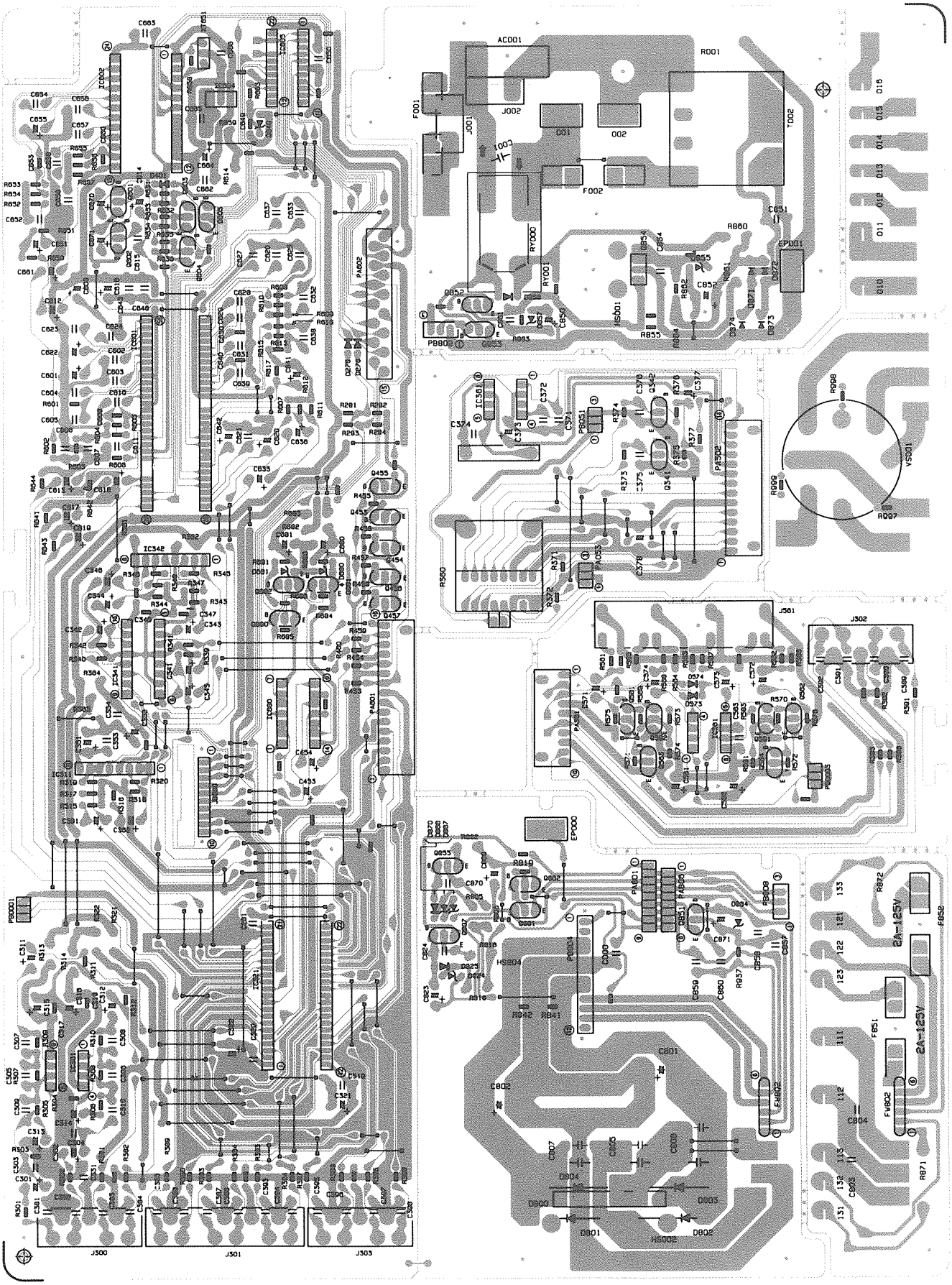

IC 104 FM / AM. IF DET
IC 105 MPX
T 105
T 107
LP 101
CF 102
C. FILTER
Q 108
BUFFER
107
AMP
Q 127
MUTE OFF SW
D 120
D 106
D 121
D 122
D 123
R 191
Q1123, 124
+B SW
MW+B
FM+B
+ 15 V
+ B
R–OUT
L–OUT
JA101
AM+B
FM/AM
STEREO
MUTE
L. P. F.
FM IN
AM IN
L OUT
R OUT
FM OUT
AM OUT
AM IF IN
AM MIX OUT
AM IN
AM OSC
AM OSC OUT
FM DET
TUNED
FM IF OUT
AM IF OUT

Printed Circuit Boards

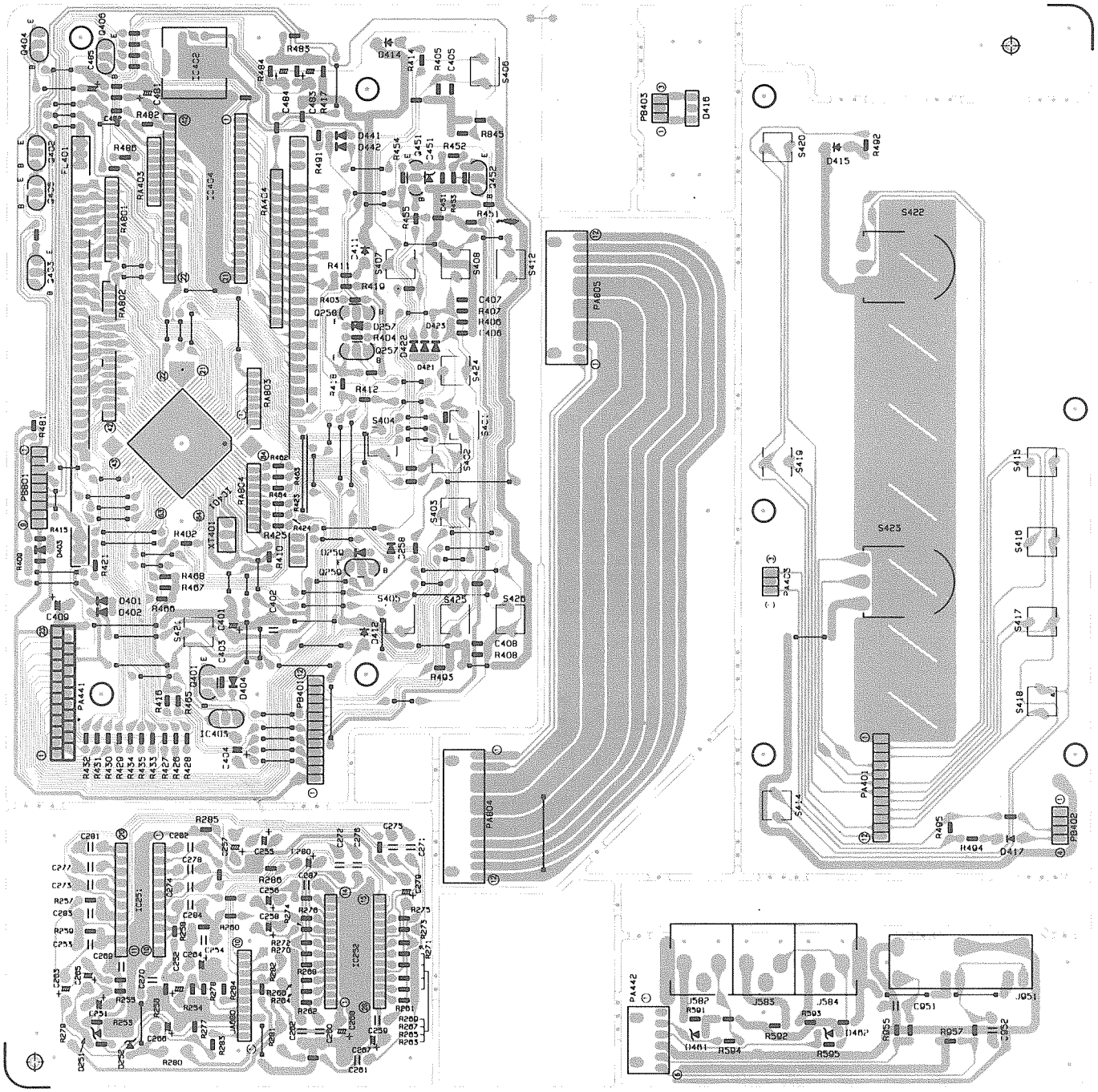
(1) Amplifier P.C.Board (ENH-255)



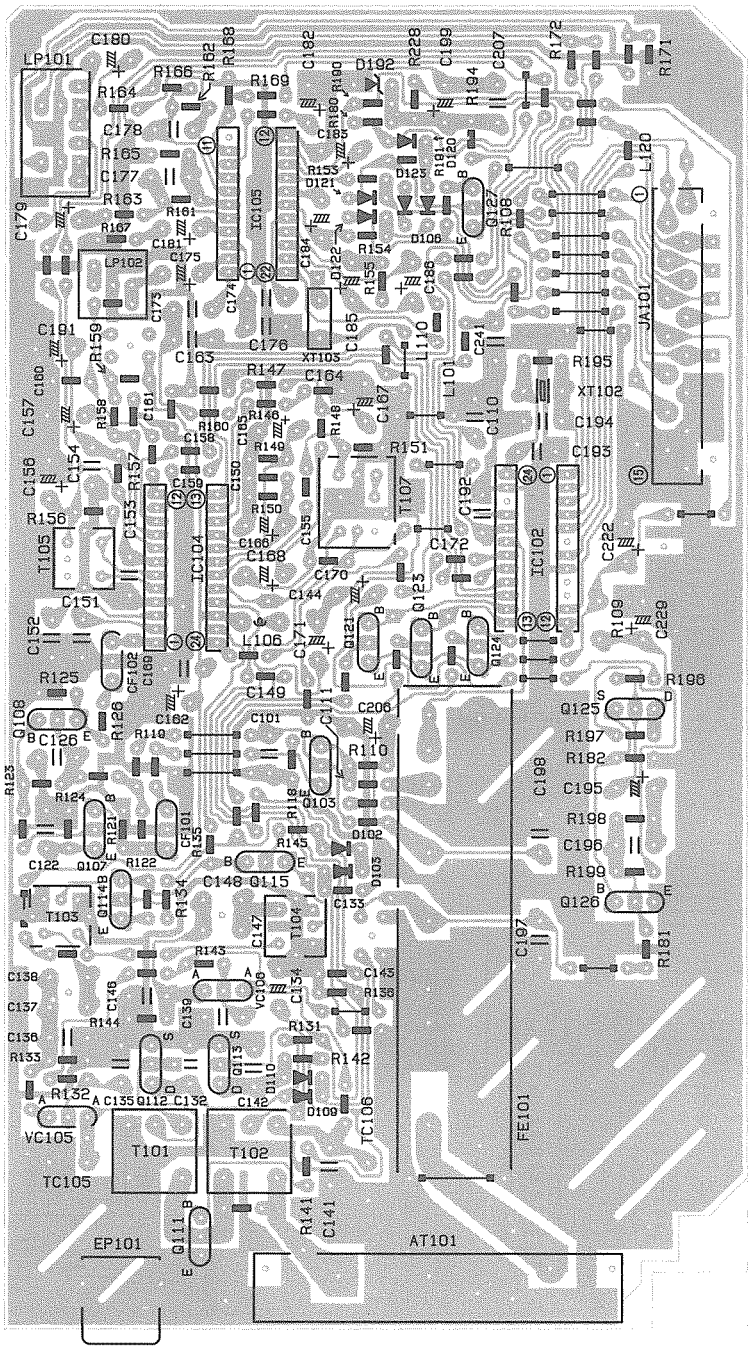
(2) Input Selector and Power Supply P.C.Board (ENC-115)



(3) FL Display P.C.Board (ENB-198)

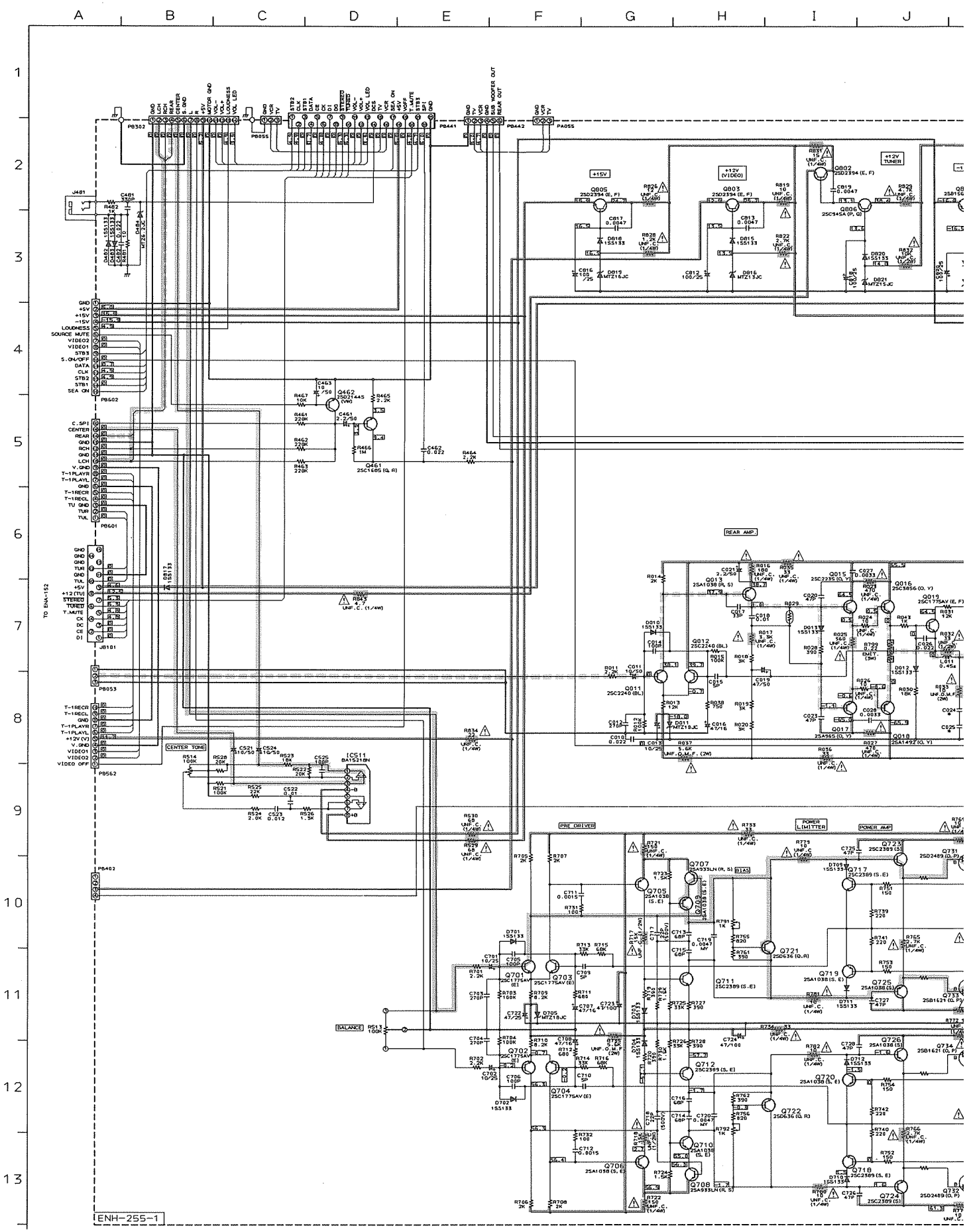


(4) Tuner P.C.Board (ENA-152)

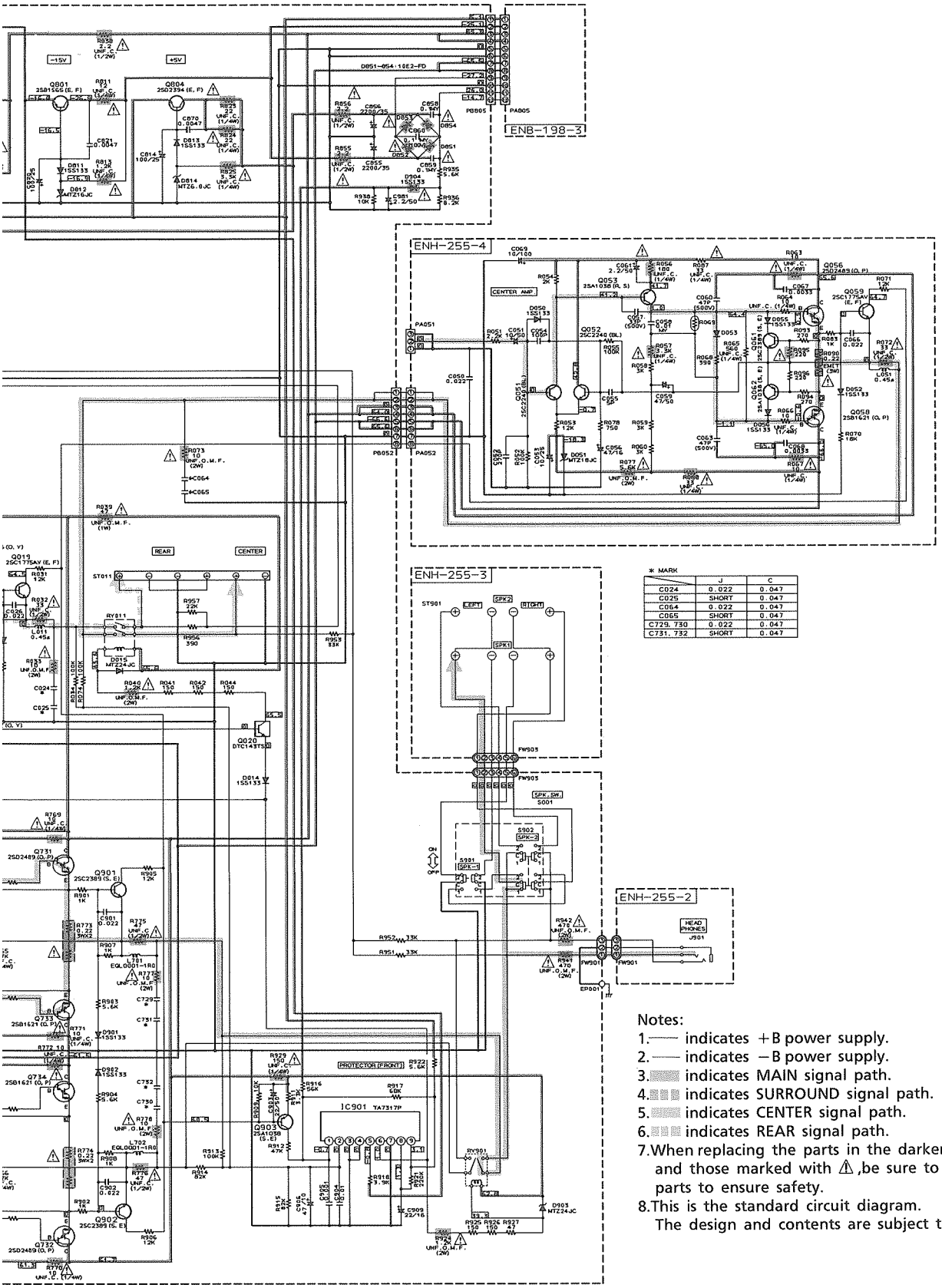


Schematic Diagrams

(1) Power Amplifier Section



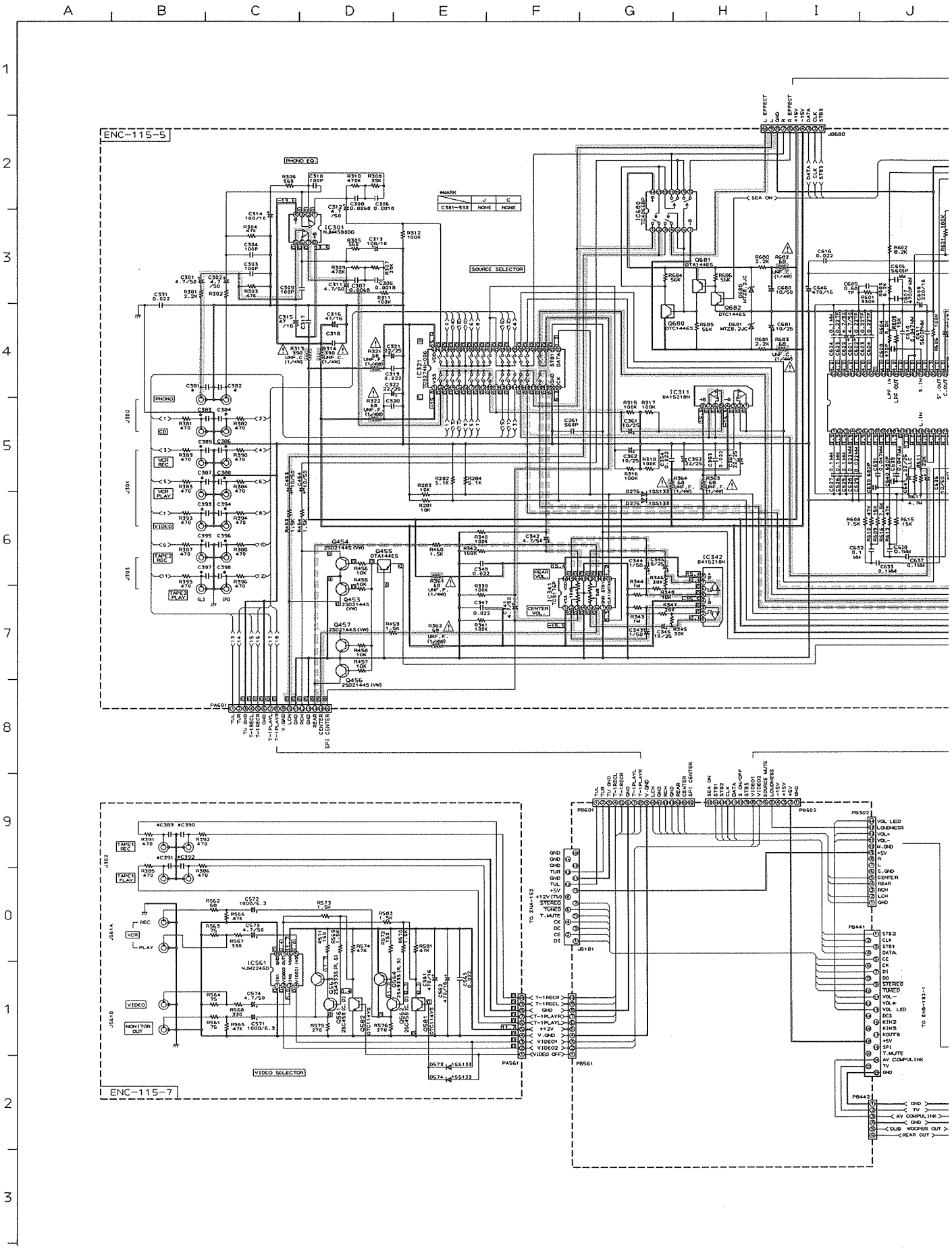
K L M N O P Q R S T



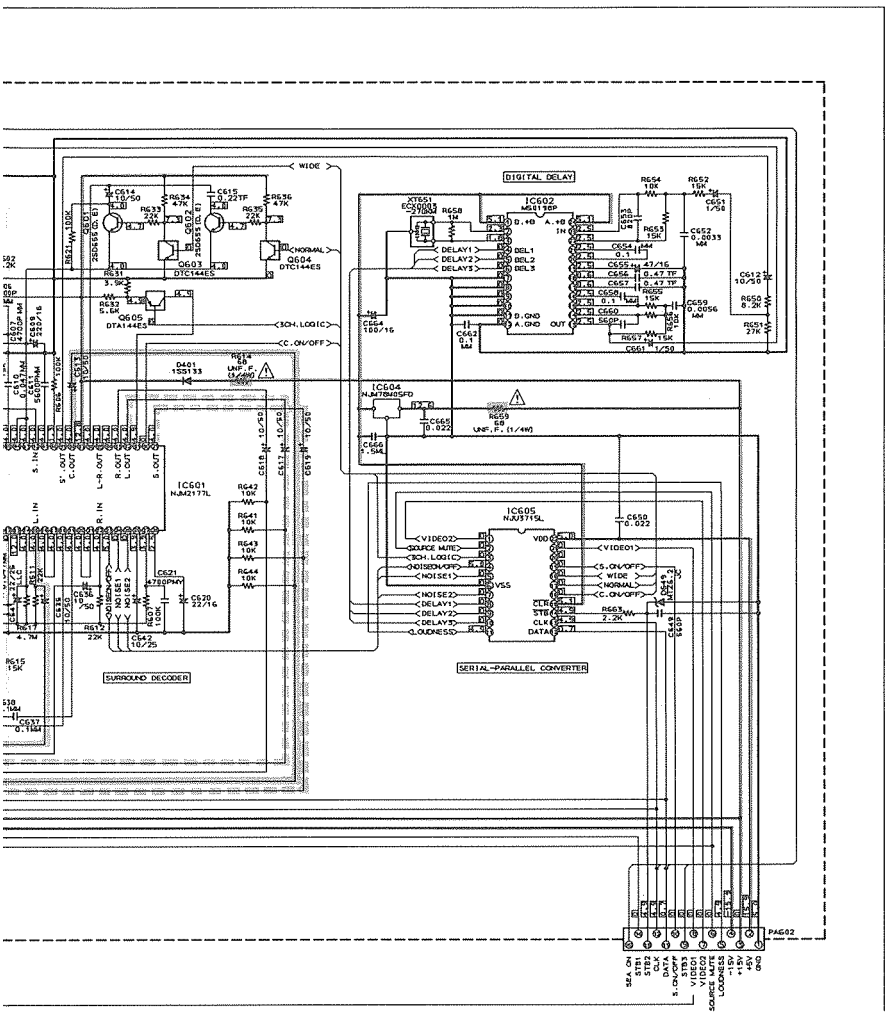
Notes:

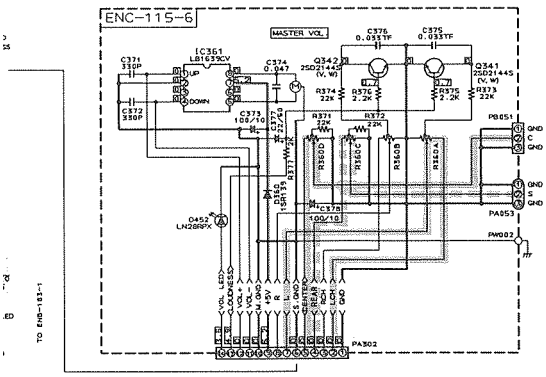
1. —— indicates +B power supply.
2. —— indicates −B power supply.
3. ▒▒ indicates MAIN signal path.
4. ▒▒ indicates SURROUND signal path.
5. ▒▒ indicates CENTER signal path.
6. ▒▒ indicates REAR signal path.
7. When replacing the parts in the darkened are (▒▒) and those marked with ⚠ ,be sure to use the designated parts to ensure safety.
8. This is the standard circuit diagram. The design and contents are subject to change withoutnotice.

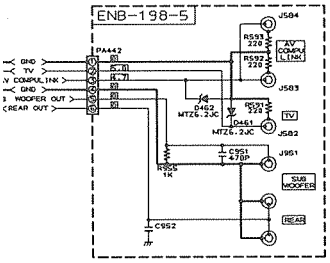
(2) Input Selector and Surround Section

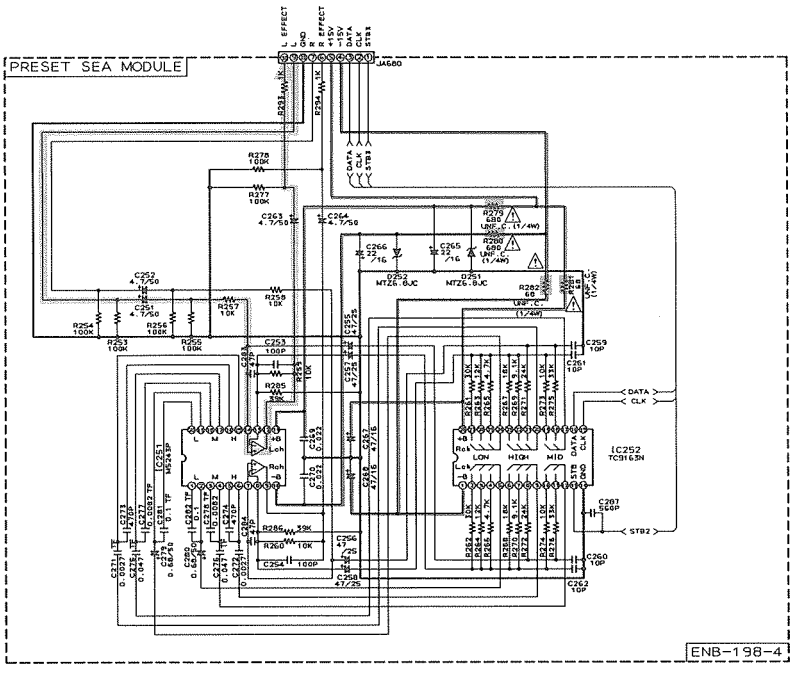


J K L M N O P Q R S T

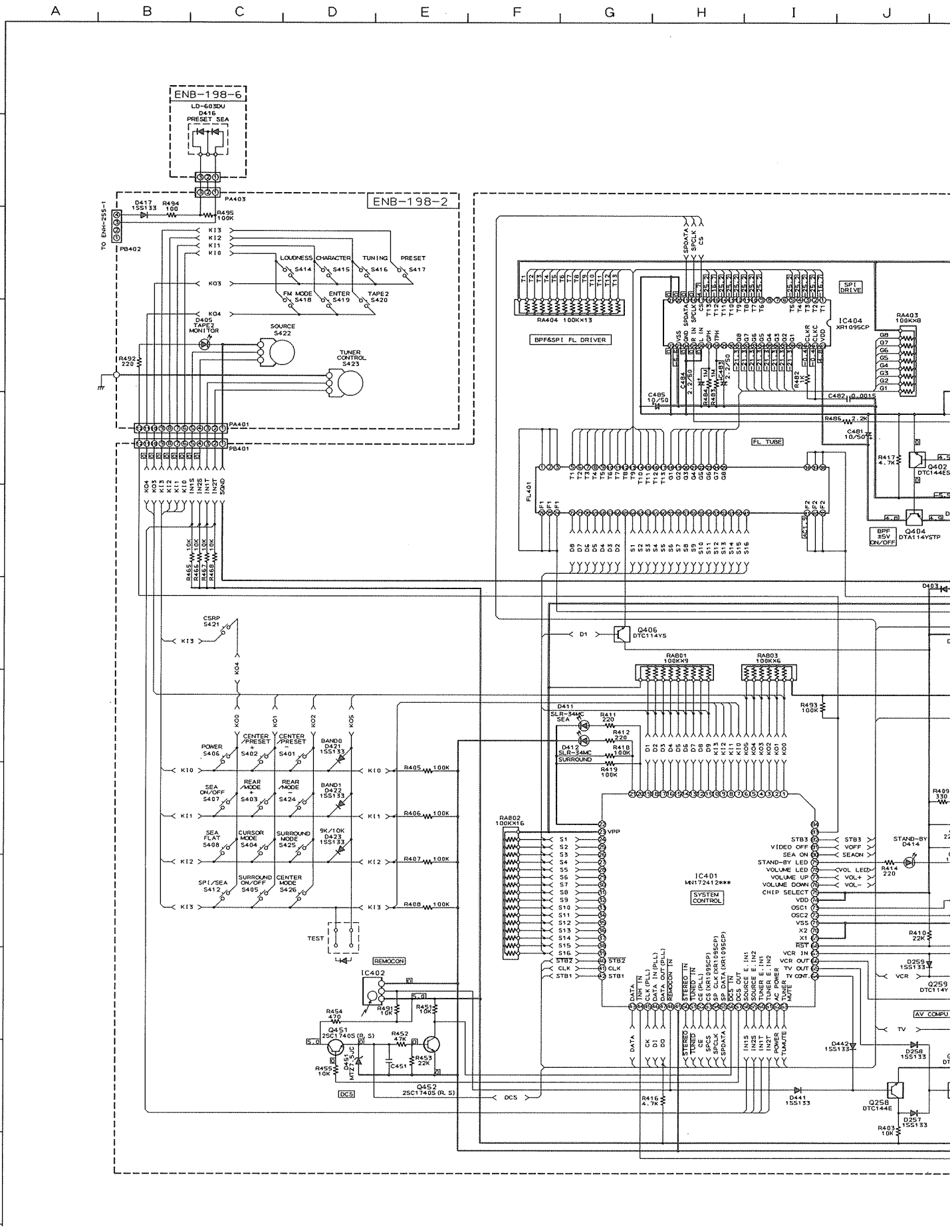




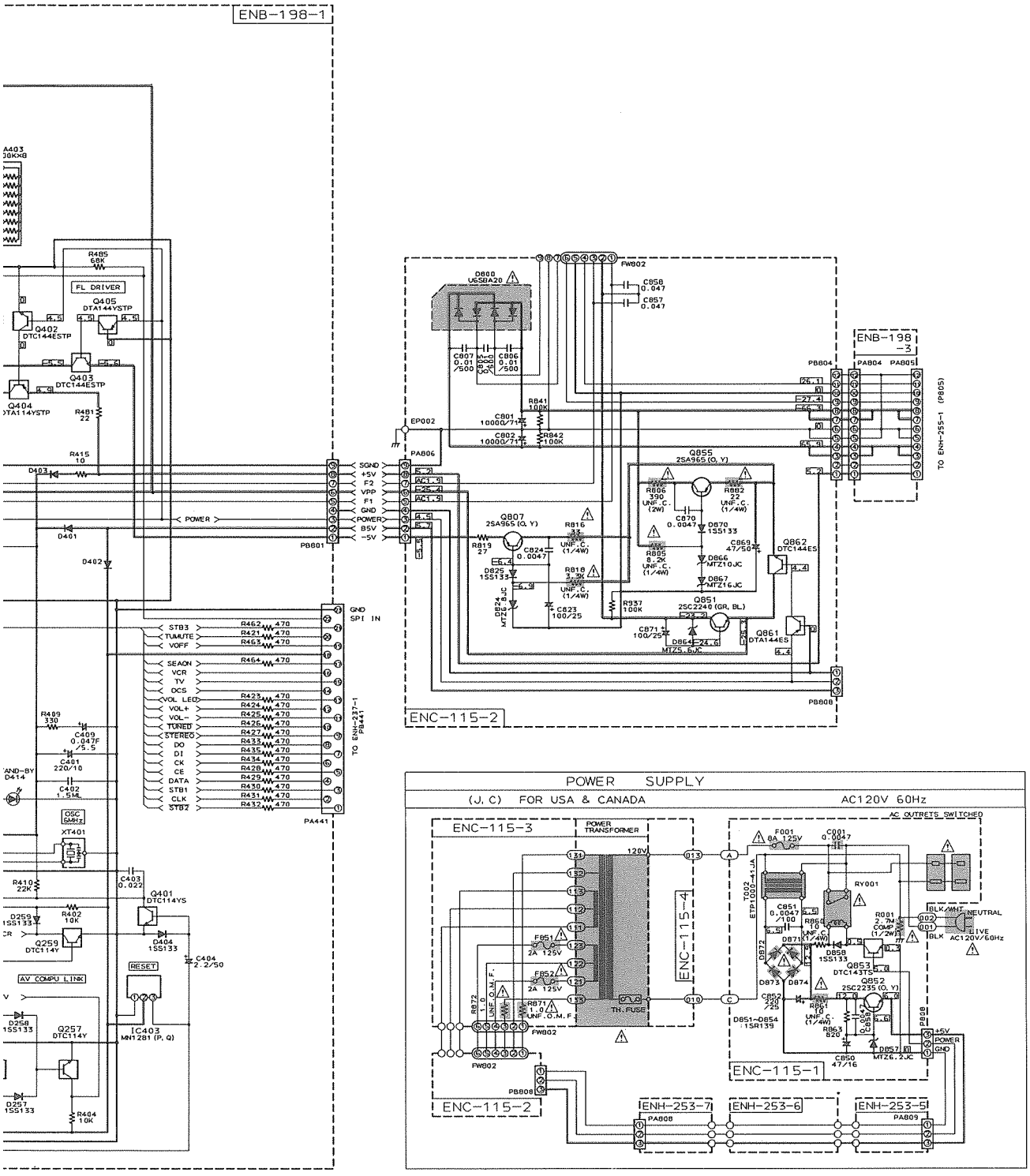




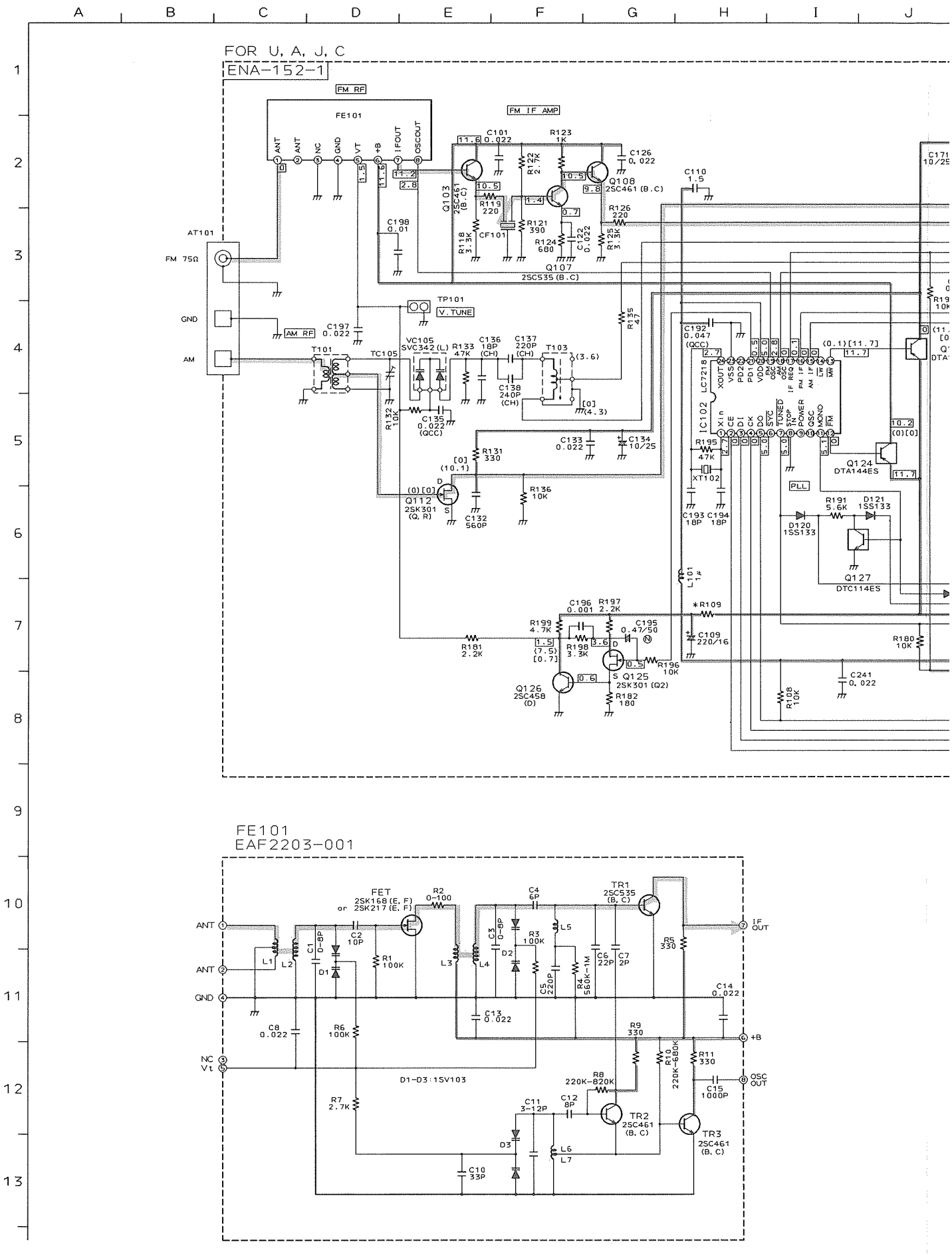
(3) FL Display and Power Supply Section



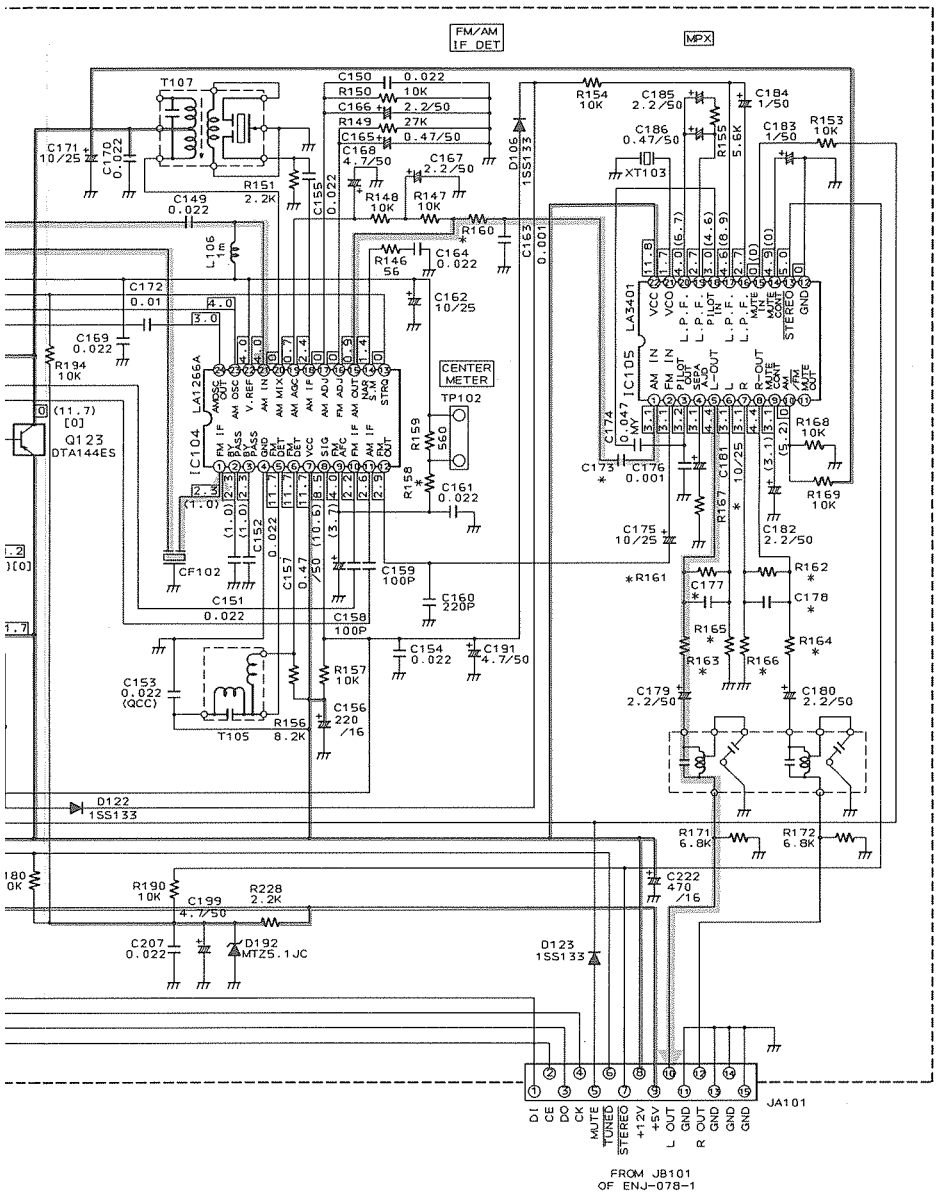
K L M N O P Q R S T


ENB-198-1
FL DRIVER
Q405 DTA144YSTP
Q402 DTC144ESTP
Q403 DTC144ESTP
Q404 DTA114YSTP
R485 68K
R481 22
R415 10
D403
D401
D402
POWER
PB801
SGND
+5V
F2
VPP
F1
GND
POWER
B5V
-5V
PA806
EP002
FW802
D800 US5DA20
C858 0.047
C857 0.047
C807 0.01/500
C806 0.01/500
C801 10000/71
C802 10000/71
RB41 100K
RB42 100K
PB804
PA804 PA805
ENB-198-3
TO ENH-255-1 (PB05)
Q855 2SA965 (O, Y)
R805 390 UNF.C. (2W)
R882 22 UNF.C. (1/4W)
C870 0.0047
D870 1SS133
R806 8.2K UNF.C. (1/4W)
D866 MTZ10JC
D867 MTZ16JC
C869 47/50
Q862 DTC144ES
Q807 2SA965 (O, Y)
RB16 33 UNF.C. (1/4W)
R819 27
C824 0.0047
D825 1SS133
R818 3.3K UNF.C. (1/4W)
D824 MTZ3.3JC
C823 100/25
R937 100K
Q851 2SC2240 (GR, BL)
C871 100/25
D864 MTZ5.6JC
Q861 DTA144ES
PB808
ENC-115-2
GND
SPI IN
STB3
TUMUTE
VOFF
SEAON
VCR
TV
DCS
VOL LED
VOL+
VOL-
TUNED
STEREO
DO
DI
CK
CE
DATA
STB1
CLK
STB2
R462 470
R421 470
R463 470
R464 470
R423 470
R424 470
R425 470
R426 470
R427 470
R433 470
R435 470
R434 470
R428 470
R429 470
R430 470
R431 470
R432 470
PA441
TO ENH-237-1 (PA44)
R409 330
C409 0.047F/5.5
C401 220/10
C402 1.5M
D414
OSC 6MHz
XT401
R410 22K
C403 0.022
Q401 DTC114YS
R402 10K
Q259 DTC114Y
D404 1SS133
C404 2.2/50
RESET
AV COMPU LINK
IC403 MN1281 (P, Q)
Q257 DTC114Y
D259 1SS133
D257 1SS133
R404 10K
POWER SUPPLY
(J, C) FOR USA & CANADA
AC120V 60Hz
ENC-115-3
POWER TRANSFORMER
120V
ENC-115-4
F851 2A 125V
F852 2A 125V
R872 1.0 UNF.O.M.F.
R871 1.0 UNF.O.M.F.
TH.FUSE
FW802
PB808
ENC-115-2
AC OUTLETS SWITCHED
F001 8A 125V
C001 0.0047
T002 ETP1003-41JA
RY001
C851 0.0047/100
R866 10 MF.C. (1/4W)
D871
D872
D873
D874
D858 1SS133
Q853 DTC143TS
Q852 2SC2235 (O, Y)
C852 220/25
R851 10 UNF.C. (1/4W)
R863 820
C850 47/16
D857 MTZ6.2JC
D851~D854 :1SR139
R001 2.7M COMP (1/2W)
BLK/WHT
NEUTRAL
BLK
LIVE AC120V/60Hz
PB809
+5V
POWER
GND
ENC-115-1
ENH-253-7
ENH-253-6
ENH-253-5
PA808
PA809

(4) Tuner Section



J K L M N O P Q R S T



* MARK

	U	A	J, C
R109	68 UNF,F. (1/4W)	68 UNF,F. (1/4W)	68 UNF,C. (1/4W)
R167	39K	47K	39K
R160	5.6K	10K	5.6K
R161, 162	82K	100K	82K
R163, 164	4.7K	3.3K	4.7K
R165, 166	180K	270K	180K
C177, 178	820P	560P	820P
R158	27K	27K	18K
C173	0.039	0.022	0.039

□FM AUTO NO SIGNAL
( )MW NO SIGNAL
[ ]LW NO SIGNAL

PARTS LIST

Note : All printed circuit borad assemblies are not available as service parts.

Contents

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Printed Circuit Board Ass'y and Parts List 2-4
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■ ENA-152 [B] Tuner PC Board Ass'y 2-16
Accessories List 2-18
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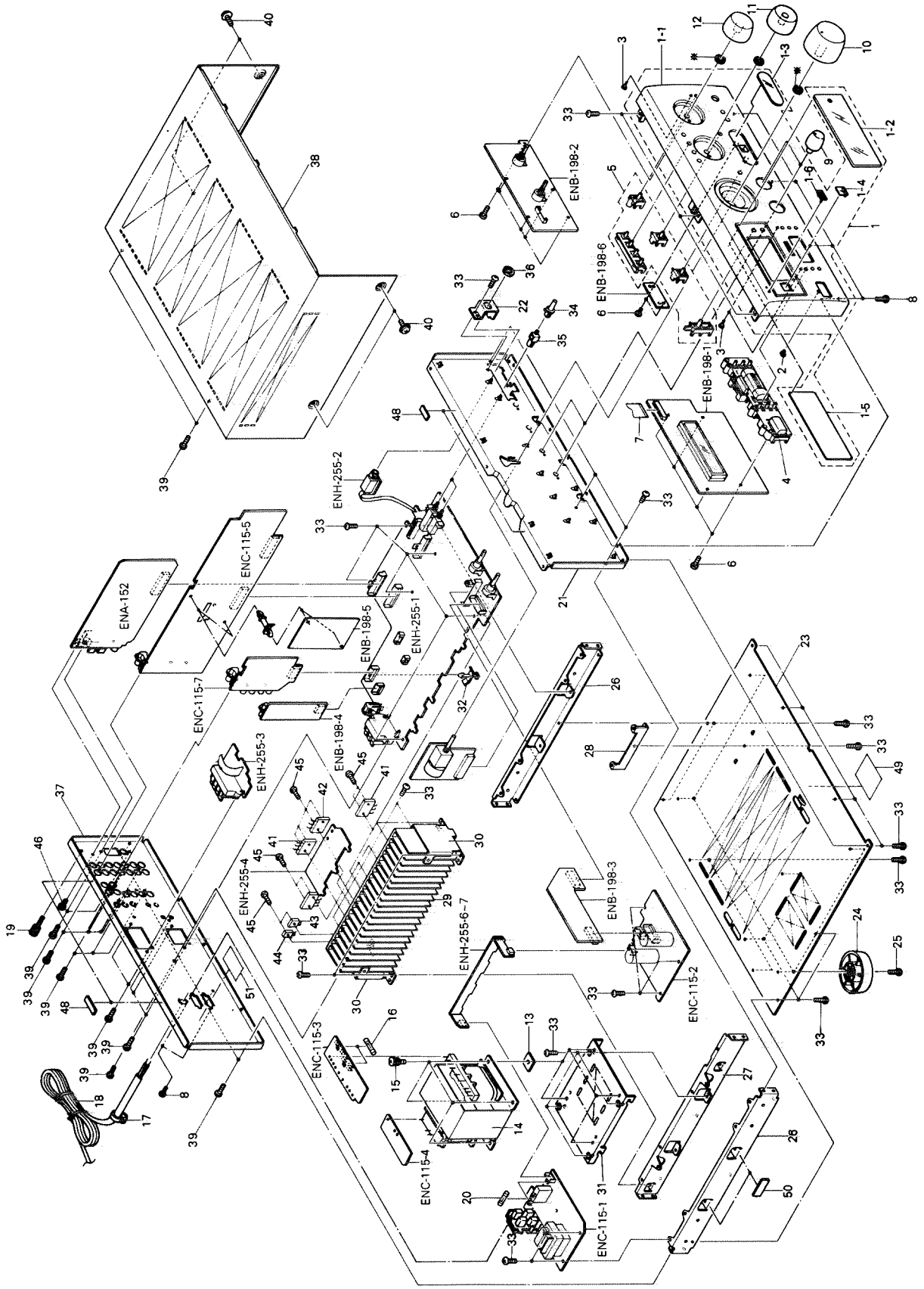
General Exploded View and Parts List

Symbol No. M 1 M M



PARTS LIAT

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-RX717VTNJ(S	FRONT PANEL ASS	1		
	1-1	E102909-008SM	FRONT PANEL	1		
	1-2	E309112-009SM	WINDOW SCREEN	1		
	1-3	4E08470-002SM	INDICATOR SHEET	1		
	1-4	E72436-006	REMORT SCREEN	1		
	1-5	E408727-001SM	FL SCREEN	1		
	1-6	VJD5429-001	JVC MARK	1		
	2	FSJD4001-002	INDICATOR	1		
	3	E408326-001SM	INDICATOR LENS	3		
	4	E208276-004SM	PUSH BUTTON	1		
	5	E309105-003SM	PUSH BUTTON	1		
	6	SDSF2608Z	SCREW	11		
	7	EWR623K-40TT	FLAT WIRE	1	FW441	
	8	SDSG3008M	TAPPING SCREW	6		
	9	E309111-005SM	BALANCE KNOB	2		
	10	E309107-002SM	VOLUME KNOB	1		
	11	E309110-004SM	VOLUME KNOB	1		
	12	E309110-002SM	SELECT KNOB	1		
	13	E406309-002	SPACER	4		
⚠	14	ETP1200-65JAJ	POWER TRANSFORMER	1		
	15	E65389-006	SPECIAL SCREW	4		
⚠	16	QMF0007-2R0J1	FUSE	2	F851,F852(125V/2.0A)	
⚠	17	QHS3876-162	CORD STOPPER	1		
⚠	18	QMP1D00-200H	POWER CORD	1		
	19	E408091-001	EARTH PLUG	1		
⚠	20	QMF0007-8R0J1	FUSE	1	F001(125V/8.0A)	
	21	E102911-001SM	FRONT BRACKET	1		
	22	E407323-002SM	HEADPHONE BRACKET	1		
	23	E102820-001SM	CHASSIS BASE	1		
	24	VJF4039-00G	FOOT	4		
	25	SBST3010Z	TAPPING SCREW	4		
	26	E208081-002SM	SIDE BRACKET	2		
	27	E208082-002SM	CENTER BRACKET	1		
	28	E407984-001SM	P.W.BOARD HOLDER	1		
	29	E309170-001SS	HEAT SINK	1		
	30	E308836-002SM	HEAT SINK BRACKET	2		
	31	E309450-001SS	TRANS BKT	1		
	32	E406084-002	FASTENER	1		
	33	SBSG3008CC	TAPPING SCREW	44		
	34	E407321-001SM	PUSH BUTTON	2		
	35	E407983-001SM	PUSH SHAFT	2		
	36	VKZ4150-001	NUT	1		
	37	E102821-010SM	REAR PANEL	1		
	38	E207378-016	METAL COVER	1		
	39	E73273-006	SPECIAL SCREW	20		
	40	E61660-004	SPECIAL SCREW	4		
	41	2SB1621LG(OPY)	SI.TRANSISTOR	3	Q058,Q771,Q772	
	42	2SD2489LG(OPY)	SI.TRANSISTOR	3	Q056,Q769,Q770	
	43	2SA1492LD(O,Y)	SI.TRANSISTOR	1	Q018	
	44	2SC3856LD(O,Y)	SI.TRANSISTOR	1	Q016	
	45	E73525-003	SCREW	14		
	46	SBST3006CC	TAPPING SCREW	1		
	47	E306232-003	FASTENER	2		

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	48	E306805-146	SPACER	4		
	49	E70115-002	CAUTION LABEL	1		C
		E70281-001	CAUTION LABEL	1		J
	50	E306805-153	SPACER	2		
	51	E65507-001	CAUTION LABEL	1		C
	51	E67199-001	CAUTION LABEL	1		J
	-	E72430-002	LABEL	1		
	-	E61029-005	NUMBER LABEL	1		
	-	E408632-002	CSA LABEL	1		C
	-	E75139-001	NAME LABEL	1		J

The Marks for Designated Areas

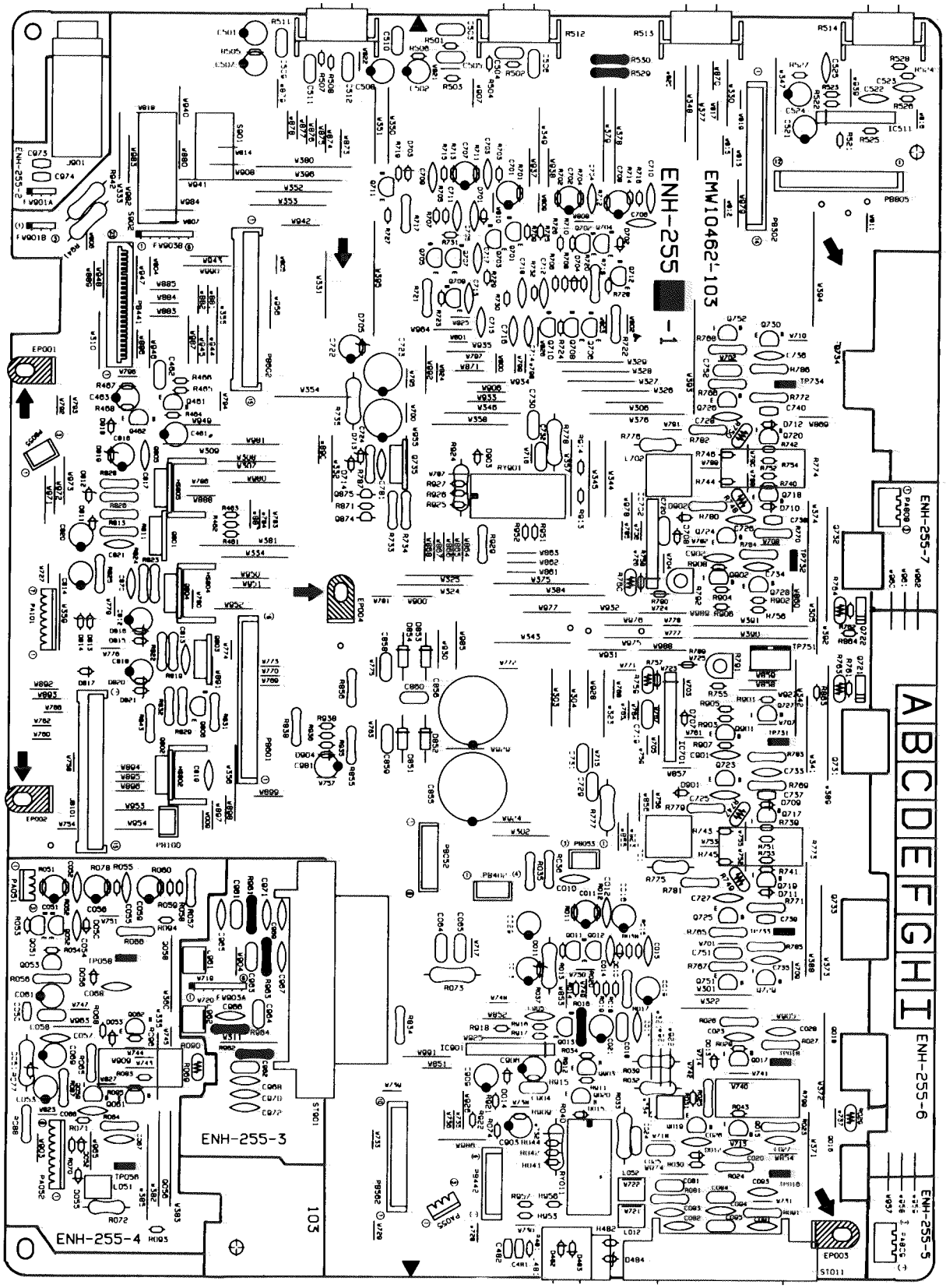
J .... the U.S.A. C ... Canada

No mark indicates all area.

Printed Circuit Board Ass'y and Parts List

■ ENH-255 □ Amplifier PC Board Assy

Note: ENH-255 □ varies according to the areas employed.See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Designated Areas
ENH-255 [A]	J	the U.S.A.
ENH-255 [B]	C	Canada

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q011	2SC2240(BL)	SI.TRANSIST	
	Q012	2SC2240(BL)	SI.TRANSIST	
	Q013	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q015	2SC2235(O/Y)	SI.TRANSIST TOSHIBA	
	Q017	2SA965(Y)	SI.TRANSIST TOSHIBA	
	Q019	2SC1775AV(F1)	SI.TRANSIST HITACHI	
	Q020	DTC143TS	DIGITAL TRA ROHM	
	Q051	2SC2240(BL)	SI.TRANSIST	
	Q052	2SC2240(BL)	SI.TRANSIST	
	Q053	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q059	2SC1775AV(F1)	SI.TRANSIST HITACHI	
	Q061	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q062	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q461	2SC1685	SI.TRANSIST	
	Q462	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q701	2SC1775AV(F1)	SI.TRANSIST HITACHI	
	Q702	2SC1775AV(F1)	SI.TRANSIST HITACHI	
	Q703	2SC1775AV(F1)	SI.TRANSIST HITACHI	
	Q704	2SC1775AV(F1)	SI.TRANSIST HITACHI	
	Q705	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q706	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q707	2SA933LN(R/S)	SI.TRANSIST ROHM	
	Q708	2SA933LN(R/S)	SI.TRANSIST ROHM	
	Q709	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q710	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q711	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q712	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q717	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q718	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q719	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q720	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q721	2SD636	SI.TRANSIST MATSUSHITA	
	Q722	2SD636	SI.TRANSIST MATSUSHITA	
	Q723	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q724	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q725	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q726	2SA1038(R/S)	SI.TRANSIST ROHM	
	Q801	2SB1565(E/F)	SI.TRANSIST ROHM	
	Q802	2SD2394(E/F)	SI.TRANSIST ROHM	
	Q803	2SD2394(E/F)	SI.TRANSIST ROHM	
	Q804	2SD2394(E/F)	SI.TRANSIST ROHM	
	Q805	2SD2394(E/F)	SI.TRANSIST ROHM	
	Q806	2SC945A	SI.TRANSIST NEC	
	Q901	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q902	2SC2389(S/E)	SI.TRANSIST ROHM	
	Q903	2SA1038(R/S)	SI.TRANSIST ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC511	BA15218N	I.C(MONO-AN ROHM	
	IC901	TA7317P	I.C(MONO-AN TOSHIBA	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D010	1SS133	SI.DIODE ROHM	
	D011	MTZ18JC	ZENER DIODE ROHM	
	D012	1SS133	SI.DIODE ROHM	
	D013	1SS133	SI.DIODE ROHM	
	D014	1SS133	SI.DIODE ROHM	
	D015	MTZ24JC	ZENER DIODE ROHM	
	D050	1SS133	SI.DIODE ROHM	
	D051	MTZ18JC	ZENER DIODE ROHM	
	D052	1SS133	SI.DIODE ROHM	
	D053	1SS133	SI.DIODE ROHM	
	D055	1SS133	SI.DIODE ROHM	
	D056	1SS133	SI.DIODE ROHM	
	D482	1SS133	SI.DIODE ROHM	
	D483	1SS133	SI.DIODE ROHM	
	D484	MTZ6.2JC	ZENER DIODE ROHM	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D701	1SS133	SI.DIODE ROHM	
	D702	1SS133	SI.DIODE ROHM	
	D703	1SS133	SI.DIODE ROHM	
	D704	1SS133	SI.DIODE ROHM	
	D705	MTZ18JC	ZENER DIODE ROHM	
	D709	1SS133	SI.DIODE ROHM	
	D710	1SS133	SI.DIODE ROHM	
	D711	1SS133	SI.DIODE ROHM	
	D712	1SS133	SI.DIODE ROHM	
	D811	1SS133	SI.DIODE ROHM	
	D812	MTZ16JC	ZENER DIODE ROHM	
	D813	1SS133	SI.DIODE ROHM	
	D814	MTZ6.8JC	ZENER DIODE ROHM	
	D815	1SS133	SI.DIODE ROHM	
	D816	MTZ13JC	ZENER DIODE ROHM	
	D817	1SS133	SI.DIODE ROHM	
	D818	1SS133	SI.DIODE ROHM	
	D819	MTZ16JC	ZENER DIODE ROHM	
	D820	1SS133	SI.DIODE ROHM	
	D821	MTZ15JC	ZENER DIODE ROHM	
⚠	D851	10E2-FD	DIODE NIHONINTER	
⚠	D852	10E2-FD	DIODE NIHONINTER	
⚠	D853	10E2-FD	DIODE NIHONINTER	
⚠	D854	10E2-FD	DIODE NIHONINTER	
	D901	1SS133	SI.DIODE ROHM	
	D902	1SS133	SI.DIODE ROHM	
	D903	MTZ24JC	ZENER DIODE ROHM	
	D904	1SS133	SI.DIODE ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C010	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C011	QETB1HM-106	10MF 50V E.CAPACITO	
	C012	QCS31HJ-271Z	270PF 50V CER.CAPACI	
	C013	QETB1EM-106	10MF 25V AL E.CAPAC	
	C014	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C015	QCS31HJ-5R0Z	5PF 50V CER.CAPACI	
	C016	QETB1CM-476	47MF 16V AL E.CAPAC	
	C017	QCS22HJ-330	33PF 500V CER.CAPACI	
	C018	QFLC1HJ-103ZM	0.01MF 50V METAL.MYLA	
	C019	QETB1HM-476	47MF 50V E.CAPACITO	
	C020	QCS32HJ-470	47PF 500V CER.CAPACI	
	C021	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C023	QCS32HJ-470	47PF 500V CER.CAPACI	
	C024	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLA	C
	C024	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLA	J
	C025	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLA	C
	C026	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C027	QCY31HK-332Z	3300PF 50V CER.CAPACI	
	C028	QCY31HK-332Z	3300PF 50V CER.CAPACI	
	C050	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C051	QETB1HM-106	10MF 50V E.CAPACITO	
	C052	QCS31HJ-271Z	270PF 50V CER.CAPACI	
	C053	QETB1EM-106	10MF 25V AL E.CAPAC	
	C054	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C055	QCS31HJ-5R0Z	5PF 50V CER.CAPACI	
	C056	QETB1CM-476	47MF 16V AL E.CAPAC	
	C057	QCS22HJ-330	33PF 500V CER.CAPACI	
	C058	QFLC1HJ-103ZM	0.01MF 50V METAL.MYLA	
	C059	QETB1HM-476	47MF 50V E.CAPACITO	
	C060	QCS32HJ-470	47PF 500V CER.CAPACI	
	C061	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C063	QCS32HJ-470	47PF 500V CER.CAPACI	
	C064	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLA	C
	C064	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLA	J
	C065	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLA	C
	C066	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C067	QCY31HK-332Z	3300PF 50V CER.CAPACI	
	C068	QCY31HK-332Z	3300PF 50V CER.CAPACI	
	C069	QETB2AM-106	10MF 100V AL E.CAPAC	
	C461	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C462	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLA	
	C463	QETB1HM-106	10MF 50V E.CAPACITO	
	C481	QCBB1HK-331Y	330PF 50V CER.CAPACI	
	C482	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C521	QETB1HM-106	10MF 50V E.CAPACITO	
	C522	QCY31HK-103Z	0.01MF 50V CER.CAPACI	
	C523	QFLC1HJ-123ZM	0.012MF 50V MYLAR CAPA	
	C524	QETB1HM-106	10MF 50V E.CAPACITO	
	C525	QCS21HJ-101A	100PF 50V CER.CAPACI	
	C701	QETB1HM-106	10MF 50V E.CAPACITO	
	C702	QETB1HM-106	10MF 50V E.CAPACITO	
	C703	QCS31HJ-271Z	270PF 50V CER.CAPACI	
	C704	QCS31HJ-271Z	270PF 50V CER.CAPACI	
	C705	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C706	QCS31HJ-101Z	100PF 50V CER.CAPACI	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C707	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C708	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C709	QCS31HJ-5R0Z	5PF	50V	CER.CAPACI	
	C710	QCS31HJ-5R0Z	5PF	50V	CER.CAPACI	
	C711	QCY31HK-152Z	1500PF	50V	CER.CAPACI	
	C712	QCY31HK-152Z	1500PF	50V	CER.CAPACI	
	C713	QCS31HJ-680Z	68PF	50V	CER.CAPACI	
	C714	QCS31HJ-680Z	68PF	50V	CER.CAPACI	
	C715	QCS31HJ-680Z	68PF	50V	CER.CAPACI	
	C716	QCS31HJ-680Z	68PF	50V	CER.CAPACI	
	C717	QCS22HJ-220	22PF	500V	CER.CAPACI	
	C718	QCS22HJ-220	22PF	500V	CER.CAPACI	
	C719	QFLC1HJ-472ZM	4700PF	50V	METAL.MYLA	
	C720	QFLC1HJ-472ZM	4700PF	50V	METAL.MYLA	
	C722	QETB1EM-476	47MF	25V	AL E.CAPAC	
	C723	QETB2AM-476	47MF	100V	AL E.CAPAC	
	C724	QETB2AM-476	47MF	100V	AL E.CAPAC	
	C725	QCS32HJ-470	47PF	500V	CER.CAPACI	
	C726	QCS32HJ-470	47PF	500V	CER.CAPACI	
	C727	QCS32HJ-470	47PF	500V	CER.CAPACI	
	C728	QCS32HJ-470	47PF	500V	CER.CAPACI	
	C729	QFLC1HJ-473ZM	0.047MF	50V	METAL.MYLA	C
	C729	QFLC1HJ-223ZM	0.022MF	50V	METAL.MYLA	J
	C730	QFLC1HJ-473ZM	0.047MF	50V	METAL.MYLA	C
	C730	QFLC1HJ-223ZM	0.022MF	50V	METAL.MYLA	J
	C731	QFLC1HJ-473ZM	0.047MF	50V	METAL.MYLA	C
	C732	QFLC1HJ-473ZM	0.047MF	50V	METAL.MYLA	C
	C733	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C734	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C735	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C736	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C812	QETB1EM-107	100MF	25V	AL E.CAPAC	
	C813	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C814	QETB1EM-107	100MF	25V	AL E.CAPAC	
	C816	QETB1EM-107	100MF	25V	AL E.CAPAC	
	C817	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C818	QETB1EM-107	100MF	25V	AL E.CAPAC	
	C819	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C820	QETB1EM-107	100MF	25V	AL E.CAPAC	
	C821	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C855	QETB1VM-228N	2200MF	35V	E.CAPACITO	
	C856	QETB1VM-228N	2200MF	35V	E.CAPACITO	
	C858	QFN82AJ-104	0.1MF	100V	MYLAR CAPA	
	C859	QFN82AJ-104	0.1MF	100V	MYLAR CAPA	
	C860	QFN82AJ-104	0.1MF	100V	MYLAR CAPA	
	C870	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C901	QCF21HP-223A	0.022MF	50V	CER.CAPACI	
	C902	QCF21HP-223A	0.022MF	50V	CER.CAPACI	
	C903	QETB1HM-226E	22MF	50V	E.CAPACITO	
	C904	QCF31HP-103Z	0.01MF	50V	CER.CAPACI	
	C905	QCY31HK-102Z	1000PF	50V	CER.CAPACI	
	C906	QETB1AM-476	47MF	10V	E.CAPACITO	
	C909	QETB1CM-226	22MF	16V	E.CAPACITO	
	C981	QETB1HM-225	2.2MF	50V	AL E.CAPAC	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R011	QRD161J-222	2.2K	1/6W	CARBON RES	
	R012	QRD161J-104	100K	1/6W	CARBON RES	
	R013	QRD161J-123	12K	1/6W	CARBON RES	
	R014	QRD161J-202	2K	1/6W	CARBON RES	
	R015	QRD161J-104	100K	1/6W	CARBON RES	
⚠	R016	QRD14CJ-181S	180	1/4W	UNF.CARBON	
⚠	R017	QRD14CJ-332SX	3.3K	1/4W	UNF.CARBON	
	R018	QRD161J-302	3K	1/6W	CARBON RES	
	R019	QRD161J-302	3K	1/6W	CARBON RES	
	R020	QRD161J-302	3K	1/6W	CARBON RES	
⚠	R023	QRD14CJ-471SX	470	1/4W	UNF.CARBON	
⚠	R024	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R025	QRD14CJ-561SX	560	1/4W	UNF.CARBON	
⚠	R026	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R027	QRD14CJ-471SX	470	1/4W	UNF.CARBON	
	R028	QRD161J-391	390	1/6W	CARBON RES	
	R029	ERT-D2WHL202S	2K	1/4W	NEGATIVE T	
	R030	QRD161J-183	18K	1/6W	CARBON RES	
	R031	QRD161J-123	12K	1/6W	CARBON RES	
⚠	R032	QRD125J-330	33	1/2W	UNF.CARBON	
⚠	R033	QRG022J-100AM	10	2W	OXIDE META	
	R034	QRD161J-104	100K	1/6W	CARBON RES	
⚠	R035	QRD14CJ-330SX	33	1/4W	UNF.CARBON	
⚠	R036	QRD14CJ-330SX	33	1/4W	UNF.CARBON	
⚠	R037	QRG022J-562AM	5.6K	2W	OXIDE META	
	R038	QRD167J-751	750	1/6W	CARBON RES	
⚠	R039	QRG012J-470A	47	1W	OXIDE META	
⚠	R040	QRG022J-122AM	1.2K	2W	OXIDE META	
	R041	QRD167J-151	150	1/6W	CARBON RES	
	R042	QRD167J-151	150	1/6W	CARBON RES	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R043	QRD161J-102	1K	1/6W	CARBON RES	
	R044	QRD167J-151	150	1/6W	CARBON RES	
	R051	QRD161J-222	2.2K	1/6W	CARBON RES	
	R052	QRD161J-104	100K	1/6W	CARBON RES	
	R053	QRD161J-123	12K	1/6W	CARBON RES	
	R054	QRD161J-202	2K	1/6W	CARBON RES	
	R055	QRD161J-104	100K	1/6W	CARBON RES	
⚠	R056	QRD14CJ-181S	180	1/4W	UNF.CARBON	
⚠	R057	QRD14CJ-332SX	3.3K	1/4W	UNF.CARBON	
	R058	QRD161J-302	3K	1/6W	CARBON RES	
	R059	QRD161J-302	3K	1/6W	CARBON RES	
	R060	QRD161J-302	3K	1/6W	CARBON RES	
⚠	R063	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R064	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R065	QRD14CJ-561SX	560	1/4W	UNF.CARBON	
⚠	R066	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R067	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
	R068	QRD161J-391	390	1/6W	CARBON RES	
	R069	ERT-D2WHL202S	2K	1/4W	NEGATIVE T	
	R070	QRD161J-183	18K	1/6W	CARBON RES	
	R071	QRD161J-123	12K	1/6W	CARBON RES	
⚠	R072	QRD125J-330	33	1/2W	UNF.CARBON	
⚠	R073	QRG022J-100AM	10	2W	OXIDE META	
	R074	QRD161J-104	100K	1/6W	CARBON RES	
⚠	R077	QRG022J-562AM	5.6K	2W	OXIDE META	
	R078	QRD167J-751	750	1/6W	CARBON RES	
	R083	QRD161J-102	1K	1/6W	CARBON RES	
⚠	R087	QRD14CJ-330SX	33	1/4W	UNF.CARBON	
⚠	R088	QRD14CJ-330SX	33	1/4W	UNF.CARBON	
⚠	R090	ERF032K-R22	0.22	3W	CEM.RESIST	
	R093	QRD161J-271	270	1/6W	CARBON RES	
	R094	QRD161J-271	270	1/6W	CARBON RES	
	R095	QRD161J-221	220	1/6W	CARBON RES	
	R096	QRD161J-221	220	1/6W	CARBON RES	
	R461	QRD161J-224	220K	1/6W	CARBON RES	
	R462	QRD161J-224	220K	1/6W	CARBON RES	
	R463	QRD161J-224	220K	1/6W	CARBON RES	
	R464	QRD161J-222	2.2K	1/6W	CARBON RES	
	R465	QRD161J-222	2.2K	1/6W	CARBON RES	
	R466	QRD161J-105	1M	1/6W	CARBON RES	
	R467	QRD161J-103	10K	1/6W	CARBON RES	
	R481	QRD161J-100	10	1/6W	CARBON RES	
	R482	QRD161J-102	1K	1/6W	CARBON RES	
	R513	QVDA96W-E15DJ3	100K		VARIABLE R	
	R514	QVDB96C-E15DJ3	100K		VARIABLE R	
	R521	QRD161J-104	100K	1/6W	CARBON RES	
	R522	QRD161J-203	20K	1/6W	CARBON RES	
	R523	QRD161J-183	18K	1/6W	CARBON RES	
	R524	QRD161J-202	2K	1/6W	CARBON RES	
	R525	QRD167J-223	22K	1/6W	CARBON RES	
	R526	QRD161J-132	1.3K	1/6W	CARBON RES	
	R527	QRD161J-104	100K	1/6W	CARBON RES	
	R528	QRD161J-203	20K	1/6W	CARBON RES	
⚠	R529	QRZ0077-680	68	1/4W	FUSIBLE RE	
⚠	R530	QRZ0077-680	68	1/4W	FUSIBLE RE	
	R701	QRD161J-222	2.2K	1/6W	CARBON RES	
	R702	QRD161J-222	2.2K	1/6W	CARBON RES	
	R703	QRD161J-104	100K	1/6W	CARBON RES	
	R704	QRD161J-104	100K	1/6W	CARBON RES	
	R705	QRD161J-202	2K	1/6W	CARBON RES	
	R706	QRD161J-202	2K	1/6W	CARBON RES	
	R707	QRD161J-202	2K	1/6W	CARBON RES	
	R708	QRD161J-202	2K	1/6W	CARBON RES	
	R709	QRD167J-822	8.2K	1/6W	CARBON RES	
	R710	QRD167J-822	8.2K	1/6W	CARBON RES	
	R711	QRD161J-681	680	1/6W	CARBON RES	
	R712	QRD161J-681	680	1/6W	CARBON RES	
	R713	QRD161J-333	33K	1/6W	CARBON RES	
	R714	QRD161J-333	33K	1/6W	CARBON RES	
	R715	QRD161J-683	68K	1/6W	CARBON RES	
	R716	QRD161J-683	68K	1/6W	CARBON RES	
	R717	QRD12CJ-153SX	15K	1/2W	UNF.CARBON	
	R718	QRD12CJ-153SX	15K	1/2W	UNF.CARBON	
	R719	QRD161J-391	390	1/6W	CARBON RES	
	R720	QRD161J-391	390	1/6W	CARBON RES	
	R721	QRD14CJ-151SX	150	1/4W	UNF.CARBON	
	R722	QRD14CJ-151SX	150	1/4W	UNF.CARBON	
	R723	QRD167J-152	1.5K	1/6W	CARBON RES	
	R724	QRD167J-152	1.5K	1/6W	CARBON RES	
	R725	QRD161J-333	33K	1/6W	CARBON RES	
	R726	QRD161J-333	33K	1/6W	CARBON RES	
	R727	QRD161J-391	390	1/6W	CARBON RES	
	R728	QRD161J-391	390	1/6W	CARBON RES	
	R729	QRD161J-391	390	1/6W	CARBON RES	
	R730	QRD161J-391	390	1/6W	CARBON RES	
	R731	QRD161J-101	100	1/6W	CARBON RES	
	R732	QRD161J-101	100	1/6W	CARBON RES	
⚠	R733	QRD14CJ-101S	100	1/4W	UNF.CARBON	
⚠	R734	QRD14CJ-101S	100	1/4W	UNF.CARBON	
⚠	R735	QRG022J-562AM	5.6K	2W	OXIDE META	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R739	QRD161J-201	200	1/6W	CARBON RES	
	R740	QRD161J-201	200	1/6W	CARBON RES	
	R741	QRD161J-201	200	1/6W	CARBON RES	
	R742	QRD161J-201	200	1/6W	CARBON RES	
	R751	QRD161J-391	390	1/6W	CARBON RES	
	R752	QRD161J-391	390	1/6W	CARBON RES	
	R753	QRD161J-391	390	1/6W	CARBON RES	
	R754	QRD161J-391	390	1/6W	CARBON RES	
	R755	QRD161J-821	820	1/6W	CARBON RES	
	R756	QRD161J-821	820	1/6W	CARBON RES	
	R761	QRD161J-391	390	1/6W	CARBON RES	
	R762	QRD161J-391	390	1/6W	CARBON RES	
⚠	R765	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
⚠	R766	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
⚠	R769	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R770	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R771	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R772	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R773	ERF032K-R22	0.22	3W	CEM.RESIST	
⚠	R774	ERF032K-R22	0.22	3W	CEM.RESIST	
⚠	R775	QRD125J-470	47	1/2W	UNF.CARBON	
⚠	R776	QRD125J-470	47	1/2W	UNF.CARBON	
⚠	R777	QRG022J-100AM	10	2W	OXIDE META	
⚠	R778	QRG022J-100AM	10	2W	OXIDE META	
⚠	R779	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R780	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R781	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R782	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R783	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R784	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R785	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R786	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
	R791	QVPA601-102A	1K		VARIABLE R	
	R792	QVPA601-102A	1K		VARIABLE R	
⚠	R799	ERF032K-R22	0.22	3W	CEM.RESIST	
⚠	R811	QRD14CJ-120SX	12	1/4W	UNF.CARBON	
⚠	R813	QRD14CJ-122SX	1.2K	1/4W	UNF.CARBON	
⚠	R819	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R822	QRD14CJ-272S	2.7K	1/4W	UNF.CARBON	
⚠	R823	QRD14CJ-220S	22	1/4W	UNF.CARBON	
⚠	R824	QRD14CJ-220S	22	1/4W	UNF.CARBON	
⚠	R825	QRD14CJ-332SX	3.3K	1/4W	UNF.CARBON	
⚠	R826	QRD14CJ-120SX	12	1/4W	UNF.CARBON	
⚠	R828	QRD14CJ-122SX	1.2K	1/4W	UNF.CARBON	
⚠	R829	QRD143J-472S	4.7K	1/4W	CARBON RES	
⚠	R831	QRD145J-150S	15	1/4W	UNF.CARBON	
⚠	R832	QRD12CJ-103S	10K	1/2W	UNF.CARBON	
⚠	R834	QRD14CJ-220S	22	1/4W	UNF.CARBON	
⚠	R838	QRD12CJ-2R2SX	2.2	1/2W	CARBON RES	
⚠	R843	QRD14CJ-4R7S	4.7	1/4W	UNF.CARBON	
⚠	R855	QRD12CJ-2R2SX	2.2	1/2W	CARBON RES	
⚠	R856	QRD12CJ-2R2SX	2.2	1/2W	CARBON RES	
	R901	QRD161J-681	680	1/6W	CARBON RES	
	R902	QRD161J-681	680	1/6W	CARBON RES	
	R903	QRD167J-562	5.6K	1/6W	CARBON RES	
	R904	QRD167J-562	5.6K	1/6W	CARBON RES	
	R905	QRD161J-123	12K	1/6W	CARBON RES	
	R906	QRD161J-123	12K	1/6W	CARBON RES	
	R907	QRD161J-102	1K	1/6W	CARBON RES	
	R908	QRD161J-102	1K	1/6W	CARBON RES	
	R909	QRD161J-103	10K	1/6W	CARBON RES	
	R911	QRD167J-332	3.3K	1/6W	CARBON RES	
	R912	QRD161J-473	47K	1/6W	CARBON RES	
	R913	QRD161J-104	100K	1/6W	CARBON RES	
	R914	QRD161J-823	82K	1/6W	CARBON RES	
	R915	QRD161J-823	82K	1/6W	CARBON RES	
	R916	QRD161J-563	56K	1/6W	CARBON RES	
	R917	QRD161J-683	68K	1/6W	CARBON RES	
	R918	QRD161J-392	3.9K	1/6W	CARBON RES	
	R921	QRD161J-224	220K	1/6W	CARBON RES	
	R922	QRD167J-562	5.6K	1/6W	CARBON RES	
⚠	R924	QRG022J-122AM	1.2K	2W	OXIDE META	
	R925	QRD167J-151	150	1/6W	CARBON RES	
	R926	QRD167J-151	150	1/6W	CARBON RES	
	R927	QRD161J-470	47	1/6W	CARBON RES	
	R929	QRD14CJ-151SX	150	1/4W	UNF.CARBON	
	R935	QRD167J-562	5.6K	1/6W	CARBON RES	
	R936	QRD167J-822	8.2K	1/6W	CARBON RES	
	R938	QRD161J-103	10K	1/6W	CARBON RES	
⚠	R941	QRG022J-471A	470	2W	OXIDE META	
⚠	R942	QRG022J-471A	470	2W	OXIDE META	
	R951	QRD161J-333	33K	1/6W	CARBON RES	
	R952	QRD161J-333	33K	1/6W	CARBON RES	
	R953	QRD161J-333	33K	1/6W	CARBON RES	
	R956	QRD161J-391	390	1/6W	CARBON RES	
	R957	QRD167J-223	22K	1/6W	CARBON RES	

⚠ :SAFETY PARTS

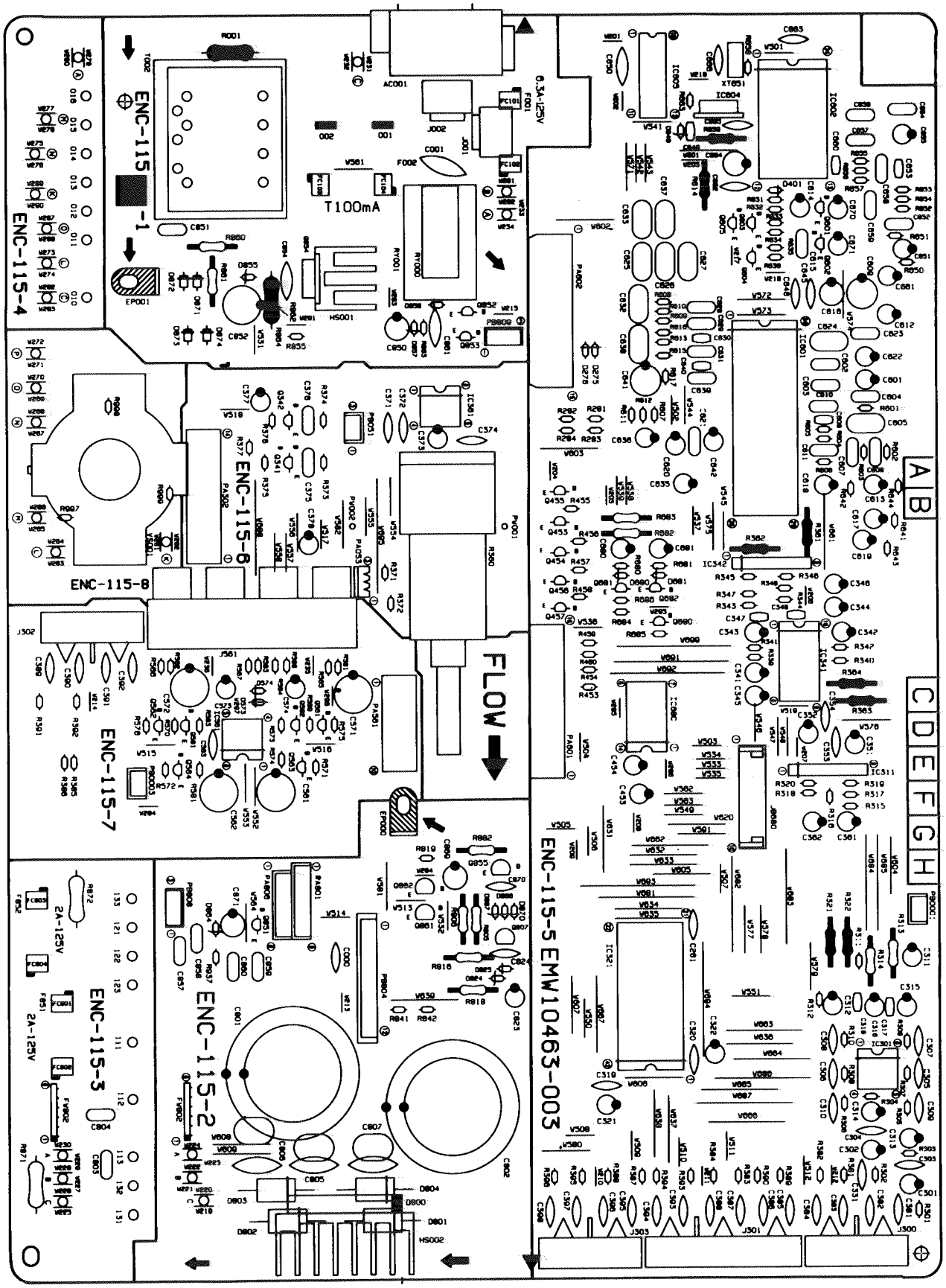
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10462-104	PRINTED BOA	
		SBSG3008C0	TAPPING SCR	
	J481	QMS3501-021	PIN JACK	
	J901	QMS6022-V01	MICROPHONE	
	L011	EQL0001-R45	INDUCTOR	
	L051	EQL0001-R45	INDUCTOR	
	L701	EQL0001-1R0	INDUCTOR	
	L702	EQL0001-1R0	INDUCTOR	
	S001	QSP6002-E02J2	PUSH SWITCH	
	EP001	EMZ4002-001Z	EARTH PLATE	
	EP002	EMZ4002-001Z	EARTH PLATE	
	EP003	EMZ4002-001Z	EARTH PLATE	
	EP004	EMZ4002-001Z	EARTH PLATE	
	FW901	EWR338-08SST	FLAT WIRE A 3PIN	
	FW903	EWR36B-45SST	FLAT WIRE A 6PIN	
	HS802	E70306-001	HEAT SINK	
	HS804	E70306-001	HEAT SINK	
	HS805	E70306-001	HEAT SINK	
	JB101	EMV5140-015	CONNECT TER 15PIN	
	PA051	EWS293-0135	SOCKET WIRE 3PIN	
	PA052	EWS268-A416	SOCKET WIRE 8PIN	
	PA055	EWS293-0145	SOCKET WIRE 3PIN	
	PA808	VMC0178-003	CONNECT TER 3PIN	
	PA809	VMC0178-003	CONNECT TER 3PIN	
	PB052	VMC0075-008N	CONNECT TER 8PIN	
	PB053	EMV5109-003A	MALE CONNEC 3PIN	
	PB055	EMV5109-003A	MALE CONNEC 3PIN	
	PB302	EMV5125-014	MALE CONNEC 14PIN	
	PB402	EMV5109-004A	MALE CONNEC 4PIN	
	PB441	EMV7123-023	MALE CONNEC 23PIN	
	PB442	EMV5125-006	CONNECT TER 6PIN	
	PB562	EMV5125-010	MALE CONNEC 10PIN	
	PB601	EMV5125-016	CONNECT TER 16PIN	
	PB602	EMV5140-015	CONNECT TER 15PIN	
	PB605	EMV5125-012	CONNECT TER 12PIN	
	RY011	[illegible]7024-2120	RELAY	
	RY901	[illegible]7024-2120	RELAY	
	ST011	EMB90TV-601G	SPEAKER TER	
	ST901	EMB90TV-806A	SPEAKER TER	
	TP751	QMV5005-004K	PLUG ASSY	

⚠ :SAFETY PARTS

■ ENC-155 □ Input Selector & Power Supply PC Board Assy

Note: ENC-115 □ varies according to the areas employed.See note (1) when placing an order.



Note (1)

PC Board Ass'y	Version	Designated Areas
ENC-115 G	J	the U.S.A.
ENC-115 H	C	Canada

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q341	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q342	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q453	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q454	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q455	DTA144ES	DIGITAL TRA ROHM	
	Q456	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q457	2SD2144S(VW)	SI.TRANSIST ROHM	
	Q561	2SC458(C,D)	SI.TRANSIST HITACHI	
	Q562	2SC458(C,D)	SI.TRANSIST HITACHI	
	Q563	2SA933S(RS)	SI.TRANSIST	
	Q564	2SA933S(RS)	SI.TRANSIST	
	Q581	DTC114YS	DIGITAL TRA ROHM	
	Q582	DTC114YS	DIGITAL TRA ROHM	
	Q601	2SD655(E,F)	SI.TRANSIST HITACHI	
	Q602	2SD655(E,F)	SI.TRANSIST HITACHI	
	Q603	DTC144ES	DIGITAL TRA ROHM	
	Q604	DTC144ES	DIGITAL TRA ROHM	
	Q605	DTA144ES	DIGITAL TRA ROHM	
	Q680	DTC144ES	DIGITAL TRA ROHM	
	Q681	DTA144ES	DIGITAL TRA ROHM	
	Q682	DTC144ES	DIGITAL TRA ROHM	
	Q807	2SA965(Y)	SI.TRANSIST TOSHIBA	
	Q851	2SC2240(GR,BL)	SI.TRANSIST TOSHIBA	
	Q852	2SC2235(O,Y)	SI.TRANSIST TOSHIBA	
	Q853	DTC143TS	DIGITAL TRA ROHM	
	Q855	2SA965(Y)	SI.TRANSIST TOSHIBA	
	Q861	DTA144ES	DIGITAL TRA ROHM	
	Q862	DTC144ES	DIGITAL TRA ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC301	NJM4580DD	I.C(MONO-AN DAINICHI	
	IC311	BA15218N	I.C(MONO-AN ROHM	
	IC321	TC9274N-007	I.C(M) TOSHIBA	
	IC341	TC9176P	I.C(DIGI-MO TOSHIBA	
	IC342	BA15218N	I.C(MONO-AN ROHM	
	IC361	LB1639-CV	I.C(DIGI-OT SANYO	
	IC561	NJM2246D	I.C(MONO-AN DAINICHI	
	IC601	NJM2177L	I.C(MONO-AN DAINICHI	
	IC602	M50198P	I.C(DIGI-MO MITSUBISHI	
	IC604	NJM78M05FA	I.C(MONO-AN DAINICHI	
	IC605	NJU3715L	I.C(MONO-AN DAINICHI	
	IC680	UPD4066BC	I.C(DIGI-MO NEC	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D275	1SS133	SI.DIODE ROHM	
	D276	1SS133	SI.DIODE ROHM	
	D360	1SR139-200	SI.DIODE ROHM	
	D401	1SS133	SI.DIODE ROHM	
	D573	1SS133	SI.DIODE ROHM	
	D574	1SS133	SI.DIODE ROHM	
	D649	MTZ6.2JC	ZENER DIODE ROHM	
	D680	MTZ8.2JC	ZENER DIODE ROHM	
	D681	MTZ8.2JC	ZENER DIODE ROHM	
⚠	D800	U6SBA20	DIODE SINDENGEN	
	D824	MTZ6.8JC	ZENER DIODE ROHM	
	D825	1SS133	SI.DIODE ROHM	
	D857	MTZ6.2JC	ZENER DIODE ROHM	
	D858	1SS133	SI.DIODE ROHM	
	D864	MTZ5.6JC	ZENER DIODE ROHM	
	D866	MTZ10JC	ZENER DIODE ROHM	
	D867	MTZ16JC	ZENER DIODE ROHM	
	D870	1SS133	SI.DIODE ROHM	
⚠	D871	1SR139-200	SI.DIODE ROHM	
⚠	D872	1SR139-200	SI.DIODE ROHM	
⚠	D873	1SR139-200	SI.DIODE ROHM	
⚠	D874	1SR139-200	SI.DIODE ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
⚠	C001	QCZ9019-472	4700PF C.CAPACITO	
	C261	QCS31HJ-561Z	560PF 50V CER.CAPACI	
	C301	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C302	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C303	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C304	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C305	QFLB1HJ-182	1800PF 50V MYLAR CAPA	
	C306	QFLB1HJ-182	1800PF 50V MYLAR CAPA	
	C307	QFLB1HJ-682	6800PF 50V MYLAR CAPA	
	C308	QFLB1HJ-682	6800PF 50V MYLAR CAPA	
	C309	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C310	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C311	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C312	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C313	QETB1AM-107	100MF 10V AL E.CAPAC	
	C314	QETB1AM-107	100MF 10V AL E.CAPAC	
	C315	QETB1CM-476	47MF 16V AL E.CAPAC	
	C316	QETB1CM-476	47MF 16V AL E.CAPAC	
	C319	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C320	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C321	QETB1EM-226	22MF 25V AL E.CAPAC	
	C322	QETB1EM-226	22MF 25V AL E.CAPAC	
	C331	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C341	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C342	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C343	QETB1HM-105	1MF 50V AL E.CAPAC	
	C344	QETB1HM-105	1MF 50V AL E.CAPAC	
	C345	QETB1EM-106	10MF 25V AL E.CAPAC	
	C346	QETB1EM-106	10MF 25V AL E.CAPAC	
	C347	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C348	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C351	QETB1EM-226	22MF 25V AL E.CAPAC	
	C352	QETB1EM-226	22MF 25V AL E.CAPAC	
	C353	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C354	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C361	QETB1EM-106	10MF 25V AL E.CAPAC	
	C362	QETB1EM-106	10MF 25V AL E.CAPAC	
	C371	QCY21HK-331	330PF 50V CERAMIC	
	C372	QCY21HK-331	330PF 50V CERAMIC	
	C373	QETB1AM-107	100MF 10V AL E.CAPAC	
	C374	QCF31HP-473Z	0.047MF 50V CER.CAPACI	
	C375	QFLC1HJ-333ZM	0.033MF 50V MYLAR CAPA	
	C376	QFLC1HJ-333ZM	0.033MF 50V MYLAR CAPA	
	C377	QETB1HM-226E	22MF 50V E.CAPACITO	
	C378	QETB1AM-107	100MF 10V AL E.CAPAC	
	C453	QER31HM-106	10MF 50V AL E.CAPAC	
	C454	QER31HM-106	10MF 50V AL E.CAPAC	
	C561	QETB1CM-477M	470MF 16V E.CAPACITO	
	C562	QETB1CM-477M	470MF 16V E.CAPACITO	
	C563	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C571	QETB0JM-108N	1000MF 6.3V E.CAPACITO	
	C572	QETB0JM-108N	1000MF 6.3V E.CAPACITO	
	C573	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C574	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C601	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C602	QFV81HJ-224	0.22MF 50V THIN FILM	
	C603	QFV81HJ-224	0.22MF 50V THIN FILM	
	C604	QFV81HJ-224	0.22MF 50V THIN FILM	
	C605	QFV81HJ-684	0.68MF 50V THIN FILM	
	C606	QFLC1HJ-562ZM	5600PF 50V MYLAR CAPA	
	C607	QFLC1HJ-472ZM	4700PF 50V METAL.MYLA	
	C608	QCBB1HK-471Y	470PF 50V CER.CAPACI	
	C609	QETB1CM-227	220MF 16V AL E.CAPAC	
	C610	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLA	
	C611	QFLC1HJ-562ZM	5600PF 50V MYLAR CAPA	
	C612	QETB1HM-106	10MF 50V E.CAPACITO	
	C613	QETB1HM-106	10MF 50V E.CAPACITO	
	C614	QETB1HM-106	10MF 50V E.CAPACITO	
	C615	QFV81HJ-224	0.22MF 50V THIN FILM	
	C616	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C617	QETB1HM-106	10MF 50V E.CAPACITO	
	C618	QETB1HM-106	10MF 50V E.CAPACITO	
	C619	QETB1HM-106	10MF 50V E.CAPACITO	
	C620	QETB1CM-226	22MF 16V E.CAPACITO	
	C621	QFN81HJ-472	4700PF 50V MYLAR CAPA	
	C622	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C623	QFV81HJ-224	0.22MF 50V THIN FILM	
	C624	QFLC1HJ-104ZM	0.1MF 50V MYLAR CAPA	
	C625	QFLC1HJ-104ZM	0.1MF 50V MYLAR CAPA	
	C626	QFLC1HJ-104ZM	0.1MF 50V MYLAR CAPA	
	C627	QFLC1HJ-104ZM	0.1MF 50V MYLAR CAPA	
	C628	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLA	
	C629	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLA	
	C630	QCBB1HK-681Y	680PF 50V CER.CAPACI	
	C631	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLA	
	C632	QFLC1HJ-104ZM	0.1MF 50V MYLAR CAPA	
	C633	QFLC1HJ-104ZM	0.1MF 50V MYLAR CAPA	
	C635	QETB1HM-106	10MF 50V E.CAPACITO	
	C636	QETB1HM-106	10MF 50V E.CAPACITO	
	C637	QFLC1HJ-104ZM	0.1MF 50V MYLAR CAPA	
	C638	QFLC1HJ-104ZM	0.1MF 50V MYLAR CAPA	
	C639	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLA	
	C640	QCBB1HK-681Y	680PF 50V CER.CAPACI	
	C641	QEBC1EM-226Z	22MF 25V LLC E.CAPA	
	C642	QETB1EM-106	10MF 25V AL E.CAPAC	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C645	QCF21HP-223A	0.022MF	50V	CER.CAPACI	
	C646	QETB1CM-477M	470MF	16V	E.CAPACITO	
	C649	QCBB1HK-561Y	560PF	50V	CER.CAPACI	
	C650	QCF21HP-223A	0.022MF	50V	CER.CAPACI	
	C651	QETB1HM-105	1MF	50V	AL E.CAPAC	
	C652	QFLC1HJ-332ZM	3300PF	50V	METAL.MYLA	
	C653	QCGB1HK-821	820PF	50V	CER.CAPACI	
	C654	QFLC1HJ-104ZM	0.1MF	50V	MYLAR CAPA	
	C655	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C656	QFV71HJ-474ZM	0.47MF	50V	THIN FILM	
	C657	QFV71HJ-474ZM	0.47MF	50V	THIN FILM	
	C658	QFLC1HJ-104ZM	0.1MF	50V	MYLAR CAPA	
	C659	QFLC1HJ-562ZM	5600PF	50V	MYLAR CAPA	
	C660	QCBB1HK-561Y	560PF	50V	CER.CAPACI	
	C661	QETB1HM-105	1MF	50V	AL E.CAPAC	
	C662	QFLC1HJ-104ZM	0.1MF	50V	MYLAR CAPA	
	C663	QCF21HP-223A	0.022MF	50V	CER.CAPACI	
	C664	QETB1CM-107	100MF	16V	AL E.CAPAC	
	C665	QCF21HP-223A	0.022MF	50V	CER.CAPACI	
	C666	QCZ0202-155	1.5MF	25V	CER.RESIST	
	C670	QETB1HM-475E	4.7MF	50V	E.CAPACITO	
	C671	QETB1HM-475E	4.7MF	50V	E.CAPACITO	
	C680	QER51HM-106	10MF	50V	AL E.CAPAC	
	C681	QETB1EM-106	10MF	25V	AL E.CAPAC	
	C801	EEW7103-109T	10000MF		AL E.CAPAC	
	C802	EEW7103-109T	10000MF		AL E.CAPAC	
	C805	QCE22HP-103A	0.01MF	500V	CER.CAPACI	
	C806	QCE22HP-103A	0.01MF	500V	CER.CAPACI	
	C807	QCE22HP-103A	0.01MF	500V	CER.CAPACI	
	C823	QETB1EM-107	100MF	25V	AL E.CAPAC	
	C824	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C850	QETB1CM-476	47MF	16V	AL E.CAPAC	
	C851	QFN82AK-472	4700PF	100V	METAL.MYLA	
	C852	QETB1EM-227	220MF	25V	AL E.CAPAC	
	C857	QFLC1HJ-473ZM	0.047MF	50V	METAL.MYLA	
	C858	QFLC1HJ-473ZM	0.047MF	50V	METAL.MYLA	
	C861	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C869	QETB1HM-476	47MF	50V	E.CAPACITO	
	C870	QCF21HP-472	4700PF	50V	CER.CAPACI	
	C871	QETB1EM-107	100MF	25V	AL E.CAPAC	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R001	QRC128K-275EM	2.7M	1/2W	COMPOSITIO	
	R281	QRD161J-103	10K	1/6W	CARBON RES	
	R282	QRD161J-512	5.1K	1/6W	CARBON RES	
	R283	QRD161J-103	10K	1/6W	CARBON RES	
	R284	QRD161J-512	5.1K	1/6W	CARBON RES	
	R301	QRD161J-222	2.2K	1/6W	CARBON RES	
	R302	QRD161J-222	2.2K	1/6W	CARBON RES	
	R303	QRD161J-473	47K	1/6W	CARBON RES	
	R304	QRD161J-473	47K	1/6W	CARBON RES	
	R305	QRD161J-561	560	1/6W	CARBON RES	
	R306	QRD161J-561	560	1/6W	CARBON RES	
	R307	QRD161J-393	39K	1/6W	CARBON RES	
	R308	QRD161J-393	39K	1/6W	CARBON RES	
	R309	QRD161J-474	470K	1/6W	CARBON RES	
	R310	QRD161J-474	470K	1/6W	CARBON RES	
	R311	QRD161J-104	100K	1/6W	CARBON RES	
	R312	QRD161J-104	100K	1/6W	CARBON RES	
⚠	R313	QRD14CJ-391SX	390	1/4W	UNF.CARBON	
⚠	R314	QRD14CJ-391SX	390	1/4W	UNF.CARBON	
	R315	QRD161J-104	100K	1/6W	CARBON RES	
	R316	QRD161J-104	100K	1/6W	CARBON RES	
	R317	QRD161J-104	100K	1/6W	CARBON RES	
	R318	QRD161J-104	100K	1/6W	CARBON RES	
⚠	R321	QRZ0077-680	68	1/4W	FUSIBLE RE	
⚠	R322	QRZ0077-680	68	1/4W	FUSIBLE RE	
	R339	QRD161J-104	100K	1/6W	CARBON RES	
	R340	QRD161J-104	100K	1/6W	CARBON RES	
	R341	QRD161J-104	100K	1/6W	CARBON RES	
	R342	QRD161J-104	100K	1/6W	CARBON RES	
	R343	QRD161J-105	1M	1/6W	CARBON RES	
	R344	QRD161J-105	1M	1/6W	CARBON RES	
	R345	QRD161J-303Y	30K	1/6W	CARBON RES	
	R346	QRD161J-303Y	30K	1/6W	CARBON RES	
	R347	QRD161J-203	20K	1/6W	CARBON RES	
	R348	QRD161J-103	10K	1/6W	CARBON RES	
	R360	QVDC94Z-E15D	100K		VARIABLE	
⚠	R361	QRZ0077-680	68	1/4W	FUSIBLE RE	
⚠	R362	QRZ0077-680	68	1/4W	FUSIBLE RE	
⚠	R363	QRZ0077-680	68	1/4W	FUSIBLE RE	
⚠	R364	QRZ0077-680	68	1/4W	FUSIBLE RE	
	R371	QRD167J-223	22K	1/6W	CARBON RES	
	R372	QRD167J-223	22K	1/6W	CARBON RES	
	R373	QRD167J-223	22K	1/6W	CARBON RES	
	R374	QRD167J-223	22K	1/6W	CARBON RES	
	R375	QRD161J-222	2.2K	1/6W	CARBON RES	
	R376	QRD161J-222	2.2K	1/6W	CARBON RES	
	R377	QRD161J-202	2K	1/6W	CARBON RES	
	R381	QRD161J-471	470	1/6W	CARBON RES	
	R382	QRD161J-471	470	1/6W	CARBON RES	
	R383	QRD161J-471	470	1/6W	CARBON RES	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R384	QRD161J-471	470	1/6W	CARBON RES	
	R385	QRD161J-471	470	1/6W	CARBON RES	
	R386	QRD161J-471	470	1/6W	CARBON RES	
	R387	QRD161J-471	470	1/6W	CARBON RES	
	R388	QRD161J-471	470	1/6W	CARBON RES	
	R389	QRD161J-471	470	1/6W	CARBON RES	
	R390	QRD161J-471	470	1/6W	CARBON RES	
	R391	QRD161J-471	470	1/6W	CARBON RES	
	R392	QRD161J-471	470	1/6W	CARBON RES	
	R393	QRD161J-471	470	1/6W	CARBON RES	
	R394	QRD161J-471	470	1/6W	CARBON RES	
	R395	QRD161J-471	470	1/6W	CARBON RES	
	R396	QRD161J-471	470	1/6W	CARBON RES	
	R453	QRD167J-152	1.5K	1/6W	CARBON RES	
	R454	QRD167J-152	1.5K	1/6W	CARBON RES	
	R455	QRD161J-103	10K	1/6W	CARBON RES	
	R456	QRD161J-103	10K	1/6W	CARBON RES	
	R457	QRD161J-103	10K	1/6W	CARBON RES	
	R458	QRD161J-103	10K	1/6W	CARBON RES	
	R459	QRD167J-152	1.5K	1/6W	CARBON RES	
	R460	QRD167J-152	1.5K	1/6W	CARBON RES	
	R561	QRD161J-750	75	1/6W	CARBON RES	
	R562	QRD167J-680	68	1/6W	CARBON RES	
	R563	QRD161J-750	75	1/6W	CARBON RES	
	R564	QRD161J-750	75	1/6W	CARBON RES	
	R565	QRD161J-473	47K	1/6W	CARBON RES	
	R566	QRD161J-473	47K	1/6W	CARBON RES	
	R567	QRD161J-331	330	1/6W	CARBON RES	
	R568	QRD161J-331	330	1/6W	CARBON RES	
	R569	QRD167J-152	1.5K	1/6W	CARBON RES	
	R570	QRD167J-152	1.5K	1/6W	CARBON RES	
	R571	QRD167J-151	150	1/6W	CARBON RES	
	R572	QRD167J-151	150	1/6W	CARBON RES	
	R573	QRD167J-152	1.5K	1/6W	CARBON RES	
	R574	QRD161J-473	47K	1/6W	CARBON RES	
	R575	QRD161J-271	270	1/6W	CARBON RES	
	R576	QRD161J-271	270	1/6W	CARBON RES	
	R581	QRD161J-473	47K	1/6W	CARBON RES	
	R583	QRD167J-152	1.5K	1/6W	CARBON RES	
	R601	QRD167J-334	330K	1/6W	CARBON RES	
	R602	QRD167J-822	8.2K	1/6W	CARBON RES	
	R603	QRD167J-822	8.2K	1/6W	CARBON RES	
	R604	QRD167J-822	8.2K	1/6W	CARBON RES	
	R605	QRD167J-153	15K	1/6W	CARBON RES	
	R606	QRD161J-104	100K	1/6W	CARBON RES	
	R607	QRD161J-104	100K	1/6W	CARBON RES	
	R608	QRD161J-752	7.5K	1/6W	CARBON RES	
	R609	QRD167J-153	15K	1/6W	CARBON RES	
	R610	QRD161J-473	47K	1/6W	CARBON RES	
	R611	QRD167J-223	22K	1/6W	CARBON RES	
	R612	QRD167J-223	22K	1/6W	CARBON RES	
	R613	QRD161J-473	47K	1/6W	CARBON RES	
⚠	R614	QRZ0077-680	68	1/4W	FUSIBLE RE	
	R615	QRD167J-153	15K	1/6W	CARBON RES	
	R616	QRD161J-752	7.5K	1/6W	CARBON RES	
	R617	QRD161J-475	4.7M	1/6W	CARBON RES	
	R621	QRD161J-104	100K	1/6W	CARBON RES	
	R631	QRD161J-392	3.9K	1/6W	CARBON RES	
	R632	QRD167J-562	5.6K	1/6W	CARBON RES	
	R633	QRD167J-223	22K	1/6W	CARBON RES	
	R634	QRD161J-473	47K	1/6W	CARBON RES	
	R635	QRD167J-223	22K	1/6W	CARBON RES	
	R636	QRD161J-473	47K	1/6W	CARBON RES	
	R641	QRD161J-103	10K	1/6W	CARBON RES	
	R642	QRD161J-103	10K	1/6W	CARBON RES	
	R643	QRD161J-103	10K	1/6W	CARBON RES	
	R644	QRD161J-103	10K	1/6W	CARBON RES	
	R650	QRD167J-822	8.2K	1/6W	CARBON RES	
	R651	QRD161J-273	27K	1/6W	CARBON RES	
	R652	QRD167J-153	15K	1/6W	CARBON RES	
	R653	QRD167J-153	15K	1/6W	CARBON RES	
	R654	QRD161J-103	10K	1/6W	CARBON RES	
	R655	QRD167J-153	15K	1/6W	CARBON RES	
	R656	QRD161J-103	10K	1/6W	CARBON RES	
	R657	QRD167J-153	15K	1/6W	CARBON RES	
	R658	QRD161J-105	1M	1/6W	CARBON RES	
⚠	R659	QRZ0077-680	68	1/4W	FUSIBLE RE	
	R663	QRD161J-222	2.2K	1/6W	CARBON RES	
	R680	QRD161J-222	2.2K	1/6W	CARBON RES	
	R681	QRD161J-222	2.2K	1/6W	CARBON RES	
⚠	R682	QRD14CJ-680SX	68	1/4W	UNF.CARBON	
⚠	R683	QRD14CJ-680SX	68	1/4W	UNF.CARBON	
	R684	QRD161J-563	56K	1/6W	CARBON RES	
	R685	QRD161J-563	56K	1/6W	CARBON RES	
	R686	QRD161J-563	56K	1/6W	CARBON RES	
	R805	QRD14CJ-822S	8.2K	1/4W	UNF.CARBON	
⚠	R806	QRG022J-391AM	390	2W	OXIDE META	
⚠	R816	QRD14CJ-330SX	33	1/4W	UNF.CARBON	
⚠	R818	QRD14CJ-332SX	3.3K	1/4W	UNF.CARBON	
	R819	QRD161J-270	27	1/6W	CARBON RES	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R841	QRD161J-104	100K	1/6W	CARBON RES	
	R842	QRD161J-104	100K	1/6W	CARBON RES	
⚠	R860	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
⚠	R861	QRD14CJ-100SX	10	1/4W	UNF.CARBON	
	R863	QRD161J-821	820	1/6W	CARBON RES	
⚠	R871	QRX022J-1R0AF	1	2W	METAL FILM	
⚠	R872	QRX022J-1R0AF	1	2W	METAL FILM	
⚠	R882	QRD14CJ-220S	22	1/4W	UNF.CARBON	
	R937	QRD161J-104	100K	1/6W	CARBON RES	

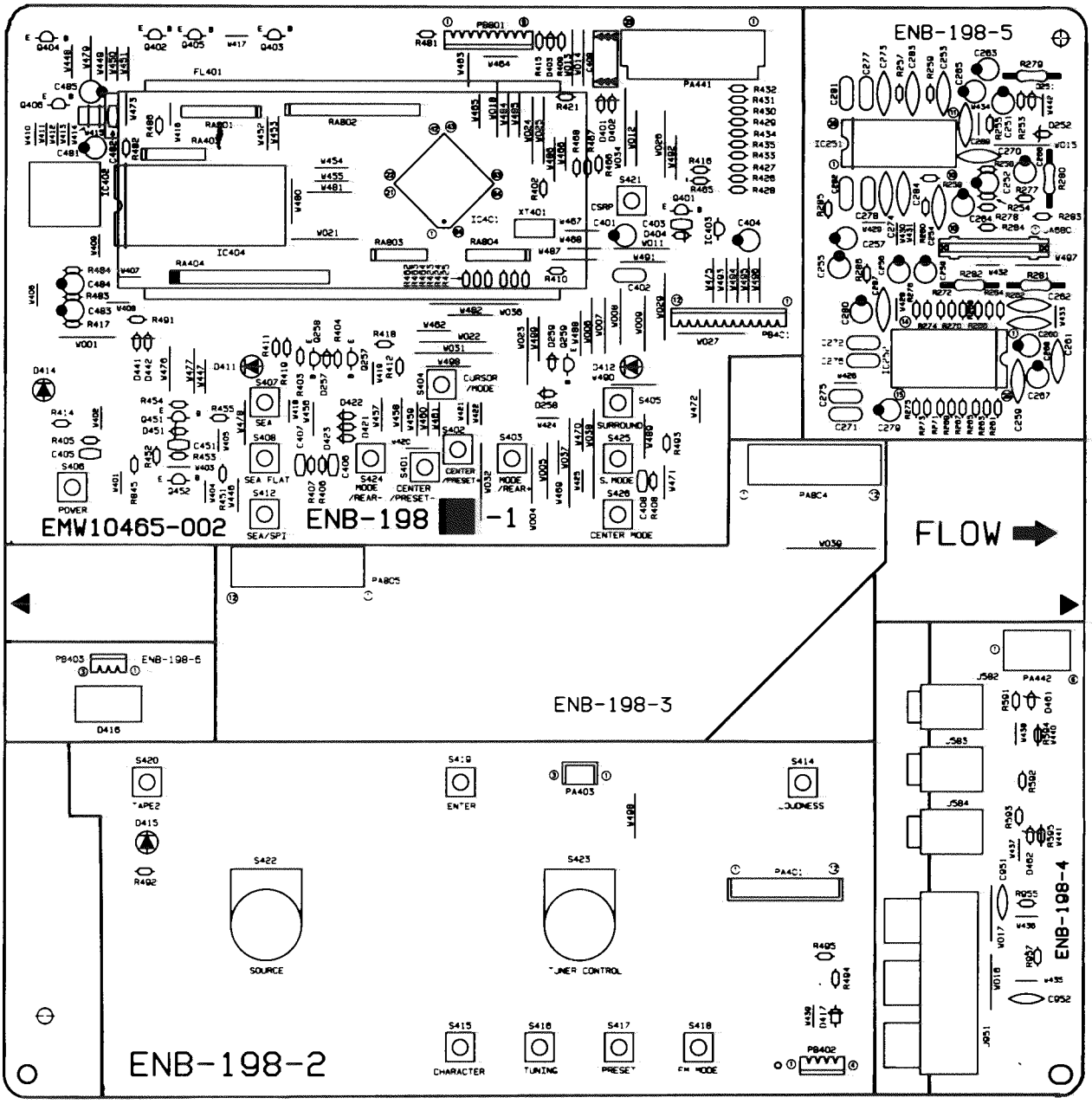
⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10463-005	PRINTED BOA	
		SBST3008CC	TAPPING SCR	
		E61380-020	FUSE LABEL	
		QWE691-09RR	VINYL WIRE	
		QWE696-09RR	VINYL WIRE	
		QWE694-09RR	VINYL WIRE	
		QWE881-16RR	VINYL WIRE	
		QWE886-20RR	VINYL WIRE	
	J300	EMN00TV-422AJ2	PIN JACK	
	J301	EMN00TV-615AJ2	PIN JACK	
	J302	EMN00TV-422AJ2	PIN JACK	
	J303	EMN00TV-422AJ2	PIN JACK	
	J561	EMN00YV-406AJ1	PIN JACK	
⚠	T002	ETP1000-41JA	POWER TRASN	
⚠	AC001	QMCA002-E02S	AC OUTLET	
	EP	EMZ4002-001Z	EARTH PLATE	
	EP001	EMZ4002-001Z	EARTH PLATE	
	FC101	VMZ0087-001Z	FUSE HOLDER	
	FC102	VMZ0087-001Z	FUSE HOLDER	
	FC801	VMZ0087-001Z	FUSE HOLDER	
	FC802	VMZ0087-001Z	FUSE HOLDER	
	FC803	VMZ0087-001Z	FUSE HOLDER	
	FC804	VMZ0087-001Z	FUSE HOLDER	
	FW802	EWR36B-08SST	FLAT WIRE A	
	HS002	E408032-002SS	HEAT SINK	
	JB680	EMV7159-010	PIN PLUG 10PIN	
	PA053	EWS293-0133	SOCKET WIRE 3PIN	
	PA302	EMV7125-014R	MALE CONNEC 14PIN	
	PA561	EMV7125-010R	MALE CONNEC 10PIN	
	PA601	EMV7125-016R	CONNECT TER 16PIN	
	PA602	EMV7140-L15R	CONNECT TER 15PIN	
	PA801	EMV5109-009A	PIN PLUG 9PIN	
	PB051	EMV5109-003A	MALE CONNEC 3PIN	
	PB804	EMV5125-012	CONNECT TER 12PIN	
	PB808	VMC0177-003	CONNECT TER 3PIN	
	PB809	VMC0177-003	CONNECT TER 3PIN	
	PWC02	EWT011-098	TERMINAL WI	
⚠	RY001	ESK1D12-215	RELAY	
	TA001	EMZ4001-001	TAB	
	TA002	EMZ4001-001	TAB	
	XT651	ECXP3R3-001ZA	CRYSTAL	

⚠ : SAFETY PARTS

■ ENB-198 [A] FL Display PC Board Assy



Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q257	DTC114YS	DIGITAL TRA ROHM	
	Q258	DTC144ES	DIGITAL TRA ROHM	
	Q259	DTC114YS	DIGITAL TRA ROHM	
	Q401	DTC114YS	DIGITAL TRA ROHM	
	Q402	DTC144ES	DIGITAL TRA ROHM	
	Q403	DTC144ES	DIGITAL TRA ROHM	
	Q404	DTA114YS	DIGITAL TRA ROHM	
	Q405	DTA114YS	DIGITAL TRA ROHM	
	Q406	DTC114YS	DIGITAL TRA ROHM	
	Q451	2SC1740S(R,S)	SI.TRANSIST ROHM	
	Q452	2SC1740S(R,S)	SI.TRANSIST ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC251	M5243P12	I.C(MONO-AN MITSUBISHI	
	IC252	TC9163N	I.C(DIGI-MO TOSHIBA	
	IC401	MN172412JYP1	I.C(MICRO-C MATSUSHITA	
	IC402	SPS-420-1	INFRARED DE SANYO	
	IC403	MN1281(P,Q)	I.C(DIGI-MO MATSUSHITA	
	IC404	XR1095CP	I.C(MONO-AN EXAR JAPAN	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D251	MTZ6.8JC	ZENER DIODE ROHM	
	D252	MTZ6.8JC	ZENER DIODE ROHM	
	D257	1SS133	SI.DIODE ROHM	
	D258	1SS133	SI.DIODE ROHM	
	D259	1SS133	SI.DIODE ROHM	
	D401	1SS133	SI.DIODE ROHM	
	D402	1SS133	SI.DIODE ROHM	
	D403	1SS133	SI.DIODE ROHM	
	D404	1SS133	SI.DIODE ROHM	
	D411	SLR-34MC70F124	L.E.D. ROHM	
	D412	SLR-34MC70F124	L.E.D. ROHM	
	D414	SLR-54VC50F124	L.E.D. ROHM	
	D415	SLR-34VC3F	L.E.D. ROHM	
	D416	LD-603DU	L.E.D. RRRR	
	D417	1SR139-200	SI.DIODE ROHM	
	D441	1SS133	SI.DIODE ROHM	
	D442	1SS133	SI.DIODE ROHM	
	D451	MTZ7.5JC	ZENER DIODE ROHM	
	D461	MTZ6.2JC	ZENER DIODE ROHM	
	D462	MTZ6.2JC	ZENER DIODE ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C251	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C252	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C253	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C254	QCS31HJ-101Z	100PF 50V CER.CAPACI	
	C255	QETB1EM-476	47MF 25V AL E.CAPAC	
	C256	QETB1EM-476	47MF 25V AL E.CAPAC	
	C257	QETB1EM-476	47MF 25V AL E.CAPAC	
	C258	QETB1EM-476	47MF 25V AL E.CAPAC	
	C259	QCS31HJ-100Z	10PF 50V CER.CAPACI	
	C260	QCS31HJ-100Z	10PF 50V CER.CAPACI	
	C261	QCS31HJ-100Z	10PF 50V CER.CAPACI	
	C262	QCS31HJ-100Z	10PF 50V CER.CAPACI	
	C263	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C264	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C265	QETB1EM-226	22MF 25V AL E.CAPAC	
	C266	QETB1EM-226	22MF 25V AL E.CAPAC	
	C267	QETB1CM-476	47MF 16V AL E.CAPAC	
	C268	QETB1CM-476	47MF 16V AL E.CAPAC	
	C269	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C270	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C271	QFLC1HJ-272	2700PF 50V METAL.MYLA	
	C272	QFLC1HJ-272	2700PF 50V METAL.MYLA	
	C273	QCS31HJ-471Z	470PF 50V CER.CAPACI	
	C274	QCS31HJ-471Z	470PF 50V CER.CAPACI	
	C275	QFV81HJ-473	0.047MF 50V THIN FILM	
	C276	QFV81HJ-473	0.047MF 50V THIN FILM	
	C277	QFLC1HJ-822ZM	8200PF 50V METAL.MYLA	
	C278	QFLC1HJ-822ZM	8200PF 50V METAL.MYLA	
	C279	QER61HM-684ZM	0.68MF 50V E.CAPACITO	
	C280	QER61HM-684ZM	0.68MF 50V E.CAPACITO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C281	QFV81HJ-104	0.1MF 50V THIN FILM	
	C282	QFV81HJ-104	0.1MF 50V THIN FILM	
	C283	QCS31HJ-470Z	47PF 50V CER.CAPACI	
	C284	QCS31HJ-470Z	47PF 50V CER.CAPACI	
	C287	QCS31HJ-561Z	560PF 50V CER.CAPACI	
	C401	QETB1AM-227	220MF 10V E.CAPACITO	
	C402	QCZ0202-155	1.5MF 25V CER.RESIST	
	C403	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C404	QEKS1HM-225G	2.2MF 50V AL E.CAPAC	
	C409	QEAD0HZ-479ZB	47000MF E.CAPACITO	
	C451	QCBB1HK-331Y	330PF 50V CER.CAPACI	
	C481	QETB1HM-106	10MF 50V E.CAPACITO	
	C482	QCG91HK-102	1000PF 50V CER.CAPACI	
	C483	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C484	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C485	QETB1HM-106	10MF 50V E.CAPACITO	
	C951	QCS31HJ-471Z	470PF 50V CER.CAPACI	
	C952	QCS31HJ-471Z	470PF 50V CER.CAPACI	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R253	QRD161J-104	100K 1/6W CARBON RES	
	R254	QRD161J-104	100K 1/6W CARBON RES	
	R255	QRD161J-104	100K 1/6W CARBON RES	
	R256	QRD161J-104	100K 1/6W CARBON RES	
	R257	QRD161J-103	10K 1/6W CARBON RES	
	R258	QRD161J-103	10K 1/6W CARBON RES	
	R259	QRD161J-103	10K 1/6W CARBON RES	
	R260	QRD161J-103	10K 1/6W CARBON RES	
	R261	QRD161J-303Y	30K 1/6W CARBON RES	
	R262	QRD161J-303Y	30K 1/6W CARBON RES	
	R263	QRD161J-123	12K 1/6W CARBON RES	
	R264	QRD161J-123	12K 1/6W CARBON RES	
	R265	QRD161J-472	4.7K 1/6W CARBON RES	
	R266	QRD161J-472	4.7K 1/6W CARBON RES	
	R267	QRD161J-183	18K 1/6W CARBON RES	
	R268	QRD161J-183	18K 1/6W CARBON RES	
	R269	QRD161J-912	9.1K 1/6W CARBON RES	
	R270	QRD161J-912	9.1K 1/6W CARBON RES	
	R271	QRD161J-243	24K 1/6W CARBON RES	
	R272	QRD161J-243	24K 1/6W CARBON RES	
	R273	QRD161J-103	10K 1/6W CARBON RES	
	R274	QRD161J-103	10K 1/6W CARBON RES	
	R275	QRD161J-333	33K 1/6W CARBON RES	
	R276	QRD161J-333	33K 1/6W CARBON RES	
	R277	QRD161J-104	100K 1/6W CARBON RES	
	R278	QRD161J-104	100K 1/6W CARBON RES	
⚠	R279	QRD14CJ-681SX	680 1/4W UNF.CARBON	
⚠	R280	QRD14CJ-681SX	680 1/4W UNF.CARBON	
⚠	R281	QRD14CJ-680SX	68 1/4W UNF.CARBON	
⚠	R282	QRD14CJ-680SX	68 1/4W UNF.CARBON	
	R283	QRD161J-102	1K 1/6W CARBON RES	
	R284	QRD161J-102	1K 1/6W CARBON RES	
	R285	QRD161J-393	39K 1/6W CARBON RES	
	R286	QRD161J-393	39K 1/6W CARBON RES	
	R402	QRD161J-103	10K 1/6W CARBON RES	
	R403	QRD161J-103	10K 1/6W CARBON RES	
	R404	QRD161J-103	10K 1/6W CARBON RES	
	R405	QRD161J-104	100K 1/6W CARBON RES	
	R406	QRD161J-104	100K 1/6W CARBON RES	
	R407	QRD161J-104	100K 1/6W CARBON RES	
	R408	QRD161J-104	100K 1/6W CARBON RES	
	R409	QRD161J-331	330 1/6W CARBON RES	
	R410	QRD167J-223	22K 1/6W CARBON RES	
	R411	QRD161J-221	220 1/6W CARBON RES	
	R412	QRD161J-221	220 1/6W CARBON RES	
	R414	QRD161J-221	220 1/6W CARBON RES	
	R415	QRD161J-100	10 1/6W CARBON RES	
	R416	QRD161J-472	4.7K 1/6W CARBON RES	
	R417	QRD161J-472	4.7K 1/6W CARBON RES	
	R418	QRD161J-104	100K 1/6W CARBON RES	
	R419	QRD161J-104	100K 1/6W CARBON RES	
	R421	QRD161J-471	470 1/6W CARBON RES	
	R423	QRD161J-221	220 1/6W CARBON RES	
	R424	QRD161J-471	470 1/6W CARBON RES	
	R425	QRD161J-471	470 1/6W CARBON RES	
	R426	QRD161J-471	470 1/6W CARBON RES	
	R427	QRD161J-471	470 1/6W CARBON RES	
	R428	QRD161J-471	470 1/6W CARBON RES	
	R429	QRD161J-471	470 1/6W CARBON RES	
	R430	QRD161J-471	470 1/6W CARBON RES	
	R431	QRD161J-471	470 1/6W CARBON RES	
	R432	QRD161J-471	470 1/6W CARBON RES	
	R433	QRD161J-471	470 1/6W CARBON RES	
	R434	QRD161J-471	470 1/6W CARBON RES	
	R435	QRD161J-471	470 1/6W CARBON RES	
	R451	QRD161J-103	10K 1/6W CARBON RES	
	R452	QRD161J-473	47K 1/6W CARBON RES	
	R453	QRD167J-223	22K 1/6W CARBON RES	
	R454	QRD161J-471	470 1/6W CARBON RES	
	R455	QRD161J-103	10K 1/6W CARBON RES	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R462	QRD161J-471	470 1/6W CARBON RES	
	R463	QRD161J-471	470 1/6W CARBON RES	
	R464	QRD161J-471	470 1/6W CARBON RES	
	R465	QRD161J-103	10K 1/6W CARBON RES	
	R466	QRD161J-103	10K 1/6W CARBON RES	
	R467	QRD161J-103	10K 1/6W CARBON RES	
	R468	QRD161J-103	10K 1/6W CARBON RES	
	R481	QRD161J-220	22 1/6W CARBON RES	
	R482	QRD161J-102	1K 1/6W CARBON RES	
	R483	QRD161J-105	1M 1/6W CARBON RES	
	R484	QRD161J-105	1M 1/6W CARBON RES	
	R485	QRD161J-683	68K 1/6W CARBON RES	
	R486	QRD161J-222	2.2K 1/6W CARBON RES	
	R491	QRD161J-103	10K 1/6W CARBON RES	
	R492	QRD161J-221	220 1/6W CARBON RES	
	R493	QRD161J-104	100K 1/6W CARBON RES	
	R494	QRD161J-821	820 1/6W CARBON RES	
	R495	QRD161J-105	1M 1/6W CARBON RES	
	R591	QRD161J-221	220 1/6W CARBON RES	
	R592	QRD161J-221	220 1/6W CARBON RES	
	R593	QRD161J-221	220 1/6W CARBON RES	
	RA403	QRB079J-104	100K 1/10W NETWORK RE	
	RA404	QRB135J-104	100K 1/8W NETWORK RE	
	RA801	QRB099J-104	100K 1/10W RESISTOR	
	RA802	QRB169J-104	100K 1/10W RESISTOR A	
	RA803	QRB069J-104	100K 1/10W NETWORK RE	
	RA804	QRB079J-104	100K 1/10W NETWORK RE	

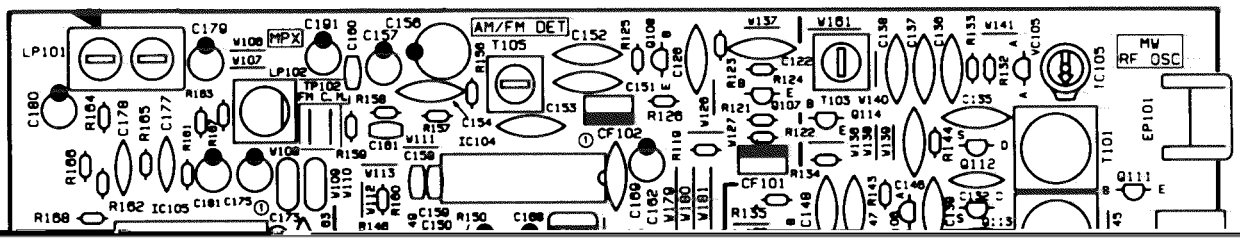
⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10465-003	PRINTED BOA	
		EWT011-098	TERMINAL WI	
		E408712-001	TWIST WIRE	
	J582	QMS3L10-0A0	MICROPHONE	
	J583	QMS3L10-0A0	MICROPHONE	
	J584	QMS3L10-0A0	MICROPHONE	
	J951	EMN00YV-319AJ1	PIN JACK	
	S401	ESP0001-023M	TACT SWITCH CENTER/PRESET-	
	S402	ESP0001-023M	TACT SWITCH CENTER/PRESET+	
	S403	ESP0001-023M	TACT SWITCH MODE/REAR+	
	S404	ESP0001-023M	TACT SWITCH CURSOR/MODE	
	S405	ESP0001-023M	TACT SWITCH SURROUND	
	S406	ESP0001-023M	TACT SWITCH POWER	
	S407	ESP0001-023M	TACT SWITCH SEA	
	S408	ESP0001-023M	TACT SWITCH SEA FLAT	
	S412	ESP0001-023M	TACT SWITCH SEA/SPI	
	S414	ESP0001-023M	TACT SWITCH LOUDNESS	
	S415	ESP0001-023M	TACT SWITCH CHARACTER	
	S416	ESP0001-023M	TACT SWITCH TUNING	
	S417	ESP0001-023M	TACT SWITCH PRESET	
	S418	ESP0001-023M	TACT SWITCH FM MODE	
	S419	ESP0001-023M	TACT SWITCH ENTER	
	S420	ESP0001-023M	TACT SWITCH TAPE2	
	S421	ESP0001-023M	TACT SWITCH CSRP	
	S422	QSJ4002-E01	PUSH SWITCH SOURCE	
	S423	QSJ4002-E01	PUSH SWITCH TUNER CONTROL	
	S424	ESP0001-023M	TACT SWITCH MODE/PRESET-	
	S425	ESP0001-023M	TACT SWITCH S.MODE	
	S426	ESP0001-023M	TACT SWITCH CENTER MODE	
	FL401	ELU0001-184	FLUORESCENT	
	JA680	EMV5159-2010	PIN PLUG 10PIN	
	PA401	EMV5109-012A	MALE CONNEC 12PIN	
	PA402	EWS264-A435	SOCKET WIRE 4PIN	
	PA403	EMV5109-003A	MALE CONNEC 3PIN	
	PA440	EMV7123-023R	MALE CONNEC 23PIN	
	PA442	EMV7125-006R	CONNECT TER 6PIN	
	PA804	EMV7125-012R	CONNECT TER 12PIN	
	PA805	EMV7125-012R	CONNECT TER 12PIN	
	PB401	EWS26C-A413	SOCKET WIRE 12PIN	
	PB403	EWS263-A408	SOCKET WIRE 3PIN	
	PB801	EWS269-A416	SOCKET WIRE 9PIN	
	SH001	E308132-001	SHIELD COVE	
	XT401	ECXP6R0-001ZA	CRYSTAL	

⚠ : SAFETY PARTS

■ ENA-152 [B] Tuner PC Board Assy



Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q103	2SC461	SI.TRANSIST	
	Q107	2SC535	SI.TRANSIST HITACHI	
	Q108	2SC461	SI.TRANSIST	
	Q112	2SK301(P,Q)	F.E.T. MATSUSHITA	
	Q123	DTA144ES	DIGITAL TRA ROHM	
	Q124	DTA144ES	DIGITAL TRA ROHM	
	Q125	2SK301(P,Q)	F.E.T. MATSUSHITA	
	Q126	2SC4586(C,D)	SI.TRANSIST HITACHI	
	Q127	DTC144ES	DIGITAL TRA ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC102	LC7218	I.C(DIGI-MO	
	IC104	LA1266A	I.C(MONO-AN SANYO	
	IC105	LA3401	I.C(MONO-AN SANYO	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	D106	1SS119	SI.DIODE	
	D120	1SS119	SI.DIODE	
	D121	1SS119	SI.DIODE	
	D122	1SS119	SI.DIODE	
	D123	1SS119	SI.DIODE	
	D192	MTZ5.1JC	ZENER DIODE ROHM	
	VC105	SVC342(L)	VARI-CAPA D SANYO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C101	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C110	QCZ0202-155	1.5MF 25V CER.RESIST	
	C122	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C126	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C132	QCS31HJ-561Z	560PF 50V CER.CAPACI	
	C133	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C134	QETB1EM-106	10MF 25V AL E.CAPAC	
	C135	QCC11EM-223V	0.022MF 25V CER.CAPACI	
	C136	QCT25CH-180Z	18PF 50V CER.CAPACI	
	C137	QCT26CH-221	220PF 50V CER.CAPACI	
	C138	QCT26CH-241	240PF 50V CER.CAPACI	
	C149	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C150	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C151	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C152	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C153	QCC11EM-223V	0.022MF 25V CER.CAPACI	
	C154	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C155	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C156	QETB1CM-227	220MF 16V AL E.CAPAC	
	C157	QETB1HM-474	0.47MF 50V ELECTRO	
	C158	QCBB1HK-101Y	100PF 50V CER.CAPACI	
	C159	QCBB1HK-101Y	100PF 50V CER.CAPACI	
	C160	QCBB1HK-221Y	220PF 50V CER.CAPACI	
	C161	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C162	QETB1EM-106	10MF 25V AL E.CAPAC	
	C163	QFLC1HJ-102ZM	1000PF 50V MYLAR CAPA	
	C164	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C165	QETB1HM-474	0.47MF 50V ELECTRO	
	C166	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C167	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C168	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C169	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C170	QCHB1EZ-223	0.022MF 25V CER.CAPACI	
	C171	QETB1EM-106	10MF 25V AL E.CAPAC	
	C172	QCVB1CM-103Y	0.01MF 16V CER.CAPACI	
	C173	QFLC1HJ-393ZM	0.039MF 50V METAL.MYLA	
	C174	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLA	
	C175	QETB1EM-106	10MF 25V AL E.CAPAC	
	C176	QCY31HK-102Z	1000PF 50V CER.CAPACI	
	C177	QCS31HJ-821Z	820PF 50V CER.CAPACI	
	C178	QCS31HJ-821Z	820PF 50V CER.CAPACI	
	C179	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C180	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C181	QETB1EM-106	10MF 25V AL E.CAPAC	
	C182	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C183	QETB1HM-105	1MF 50V AL E.CAPAC	
	C184	QETB1HM-105	1MF 50V AL E.CAPAC	
	C185	QETB1HM-225	2.2MF 50V AL E.CAPAC	
	C186	QETB1HM-474	0.47MF 50V ELECTRO	
	C191	QETB1HM-475E	4.7MF 50V E.CAPACITO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	C192	QCC31EM-473ZV	0.047MF 25V CER.CAPACI	
	C193	QCS21HJ-180A	18PF 50V CER.CAPACI	
	C194	QCS21HJ-180A	18PF 50V CER.CAPACI	
	C195	QENB1HM-474	0.47MF 50V NP E.CAPAC	
	C196	QCY31HK-102Z	1000PF 50V CER.CAPACI	
	C197	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C198	QCF31HP-103Z	0.01MF 50V CER.CAPACI	
	C199	QETB1HM-475E	4.7MF 50V E.CAPACITO	
	C207	QCF21HP-223A	0.022MF 50V CER.CAPACI	
	C222	QETB1CM-477M	470MF 16V E.CAPACITO	
	C229	QETB1CM-227	220MF 16V AL E.CAPAC	
	C241	QCF21HP-223A	0.022MF 50V CER.CAPACI	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R108	QRD161J-103	10K 1/6W CARBON RES	
⚠	R109	QRD14CJ-680SX	68 1/4W UNF.CARBON	
	R118	QRD167J-332	3.3K 1/6W CARBON RES	
	R119	QRD161J-221	220 1/6W CARBON RES	
	R121	QRD161J-391	390 1/6W CARBON RES	
	R122	QRD167J-272	2.7K 1/6W CARBON RES	
	R123	QRD161J-102	1K 1/6W CARBON RES	
	R124	QRD161J-681	680 1/6W CARBON RES	
	R125	QRD167J-332	3.3K 1/6W CARBON RES	
	R126	QRD161J-221	220 1/6W CARBON RES	
	R131	QRD161J-331	330 1/6W CARBON RES	
	R132	QRD161J-103	10K 1/6W CARBON RES	
	R133	QRD161J-473	47K 1/6W CARBON RES	
	R135	QRD161J-470	47 1/6W CARBON RES	
	R136	QRD161J-103	10K 1/6W CARBON RES	
	R146	QRD167J-560	56 1/6W CARBON RES	
	R147	QRD161J-103	10K 1/6W CARBON RES	
	R148	QRD161J-103	10K 1/6W CARBON RES	
	R149	QRD167J-223	22K 1/6W CARBON RES	
	R150	QRD161J-103	10K 1/6W CARBON RES	
	R151	QRD161J-222	2.2K 1/6W CARBON RES	
	R153	QRD161J-103	10K 1/6W CARBON RES	
	R154	QRD161J-103	10K 1/6W CARBON RES	
	R155	QRD167J-562	5.6K 1/6W CARBON RES	
	R156	QRD167J-822	8.2K 1/6W CARBON RES	
	R157	QRD161J-103	10K 1/6W CARBON RES	
	R158	QRD161J-183	18K 1/6W CARBON RES	
	R159	QRD161J-561	560 1/6W CARBON RES	
	R160	QRD167J-562	5.6K 1/6W CARBON RES	
	R161	QRD161J-823	82K 1/6W CARBON RES	
	R162	QRD161J-823	82K 1/6W CARBON RES	
	R163	QRD161J-472	4.7K 1/6W CARBON RES	
	R164	QRD161J-472	4.7K 1/6W CARBON RES	
	R165	QRD161J-184	180K 1/6W CARBON RES	
	R166	QRD161J-184	180K 1/6W CARBON RES	
	R167	QRD161J-393	39K 1/6W CARBON RES	
	R168	QRD161J-103	10K 1/6W CARBON RES	
	R169	QRD161J-103	10K 1/6W CARBON RES	
	R171	QRD167J-682	6.8K 1/6W CARBON RES	
	R172	QRD167J-682	6.8K 1/6W CARBON RES	
	R180	QRD161J-103	10K 1/6W CARBON RES	
	R181	QRD161J-222	2.2K 1/6W CARBON RES	
	R182	QRD161J-181	180 1/6W CARBON RES	
	R190	QRD161J-103	10K 1/6W CARBON RES	
	R191	QRD167J-562	5.6K 1/6W CARBON RES	
	R194	QRD161J-103	10K 1/6W CARBON RES	
	R195	QRD161J-473	47K 1/6W CARBON RES	
	R196	QRD161J-103	10K 1/6W CARBON RES	
	R197	QRD161J-222	2.2K 1/6W CARBON RES	
	R198	QRD167J-332	3.3K 1/6W CARBON RES	
	R199	QRD161J-472	4.7K 1/6W CARBON RES	
	R228	QRD161J-222	2.2K 1/6W CARBON RES	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMW10309-301A	PRINTED BOA	
	L101	EQL4007-1R0	INDUCTOR	
	L106	EQL3001-102K	INDUCTOR	
	L120	EQL4007-1R0	INDUCTOR	
	T101	EQR1111-014	RF COIL	
	T103	EQR1207-017	RF COIL	
	T105	EQT2140-017	I.F.TRANSFO	
	T107	ECB1560-010	CERAMIC FIL	
	AT101	EMB41YV-301K	ANTENNA TER	
	CF101	ECB2123-006R	CERAMIC FIL	
	CF102	ECB2123-006R	CERAMIC FIL	
	EP102	E70225-001	EARTH PLATE	
	FE101	EAF2203-004	FRONT END	
	JA101	EMV7140-L15R	CONNECT TER 15PIN	
	LP101	EQF0101-002	LOWPASS FIL	
	TC105	ENZ1003-006	TRIMMER CAP	
	XT102	ECX0007-200KC	CRYSTAL	
	XT103	ECX0000-456KR	CERAMIC RES	

⚠ : SAFETY PARTS

Accessories List

Symbol No. M 2 M M

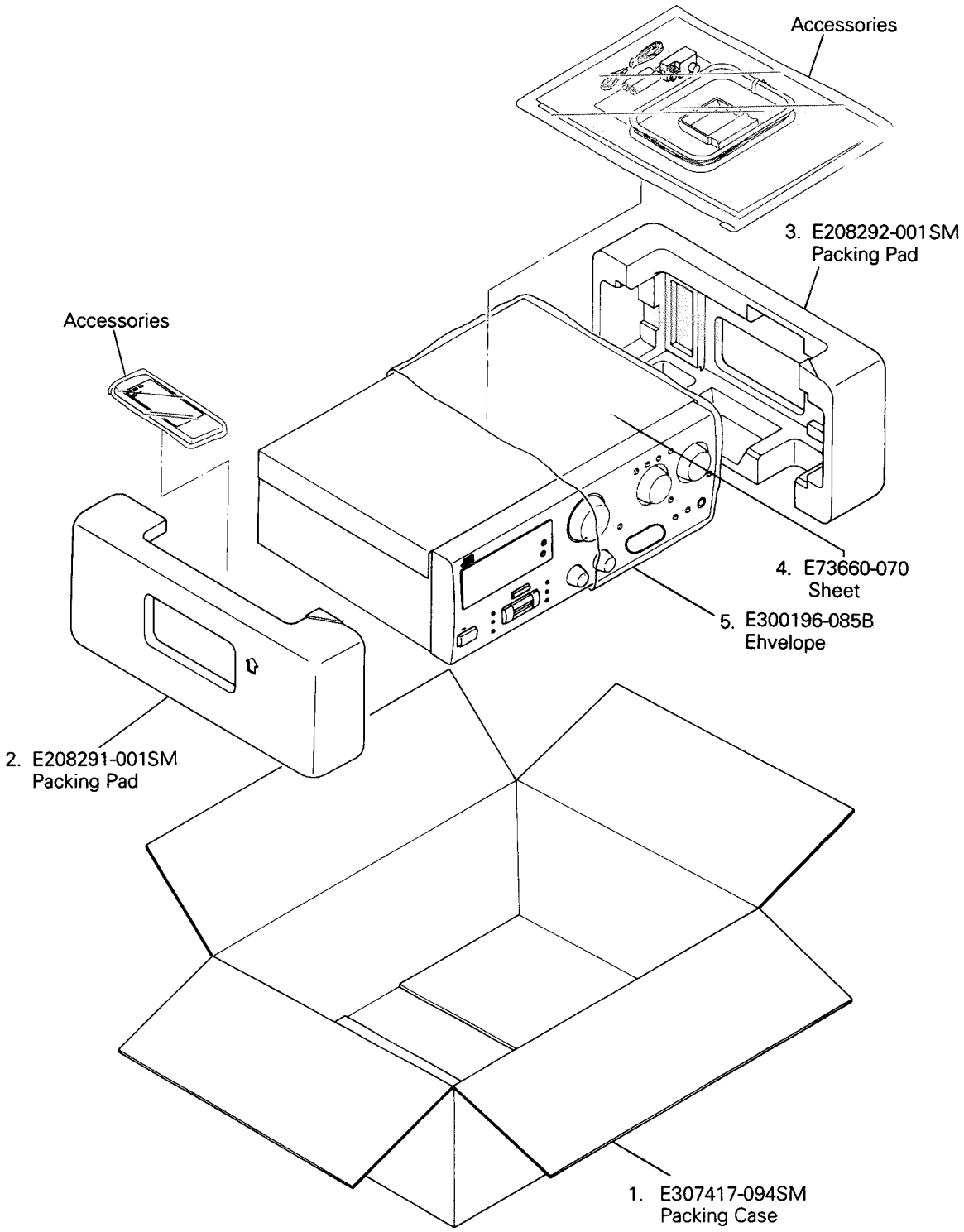
⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	E30580-2168A	INSTRUCTION BOOK	1		C
	1	E30580-2166A	INSTRUCTION BOOK	1		J
	2	RM-SR717VU	WIRE-LESS REMOTE CONTROL	1		
	3	EWP502-001	FM FEEDER ANTENNA	1		
	4	EQB4001-015	LOOP ANTENNA	1		
	5	EMZ2001-014	ADAPTOR PLUG	1		
	6	R6PRPA-2STSA	DRY CELL	1		
	-	QPGA025-03505B	POLY BAG	1		
	-	BT-20025M	WARRANTY CARD	1		C
	-	BT20071B	SERVICE NETWORK	1		C
	-	BT-51006-1	REGISTER CARD	1		J
	-	BT-20044G	SAFETY SHEET	1		J

The Marks for Designated Areas

J .... the U.S.A. C ... Canada No mark indicates all area.

Packing Materials and Part Numbers

Symbol No. M 3 M M



The Marks for Designated Areas		
C ..... Canada	J ..... the U.S.A.	No mark indicates all area.

RX-717VTN

JVC

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AUDIO DIVISION, YAMATO PLANT, 1644, SHIMOTSURUMA, YAMATO - SHI, KANAGAWA - KEN, 242, JAPAN

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